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Volume 5
Number 11

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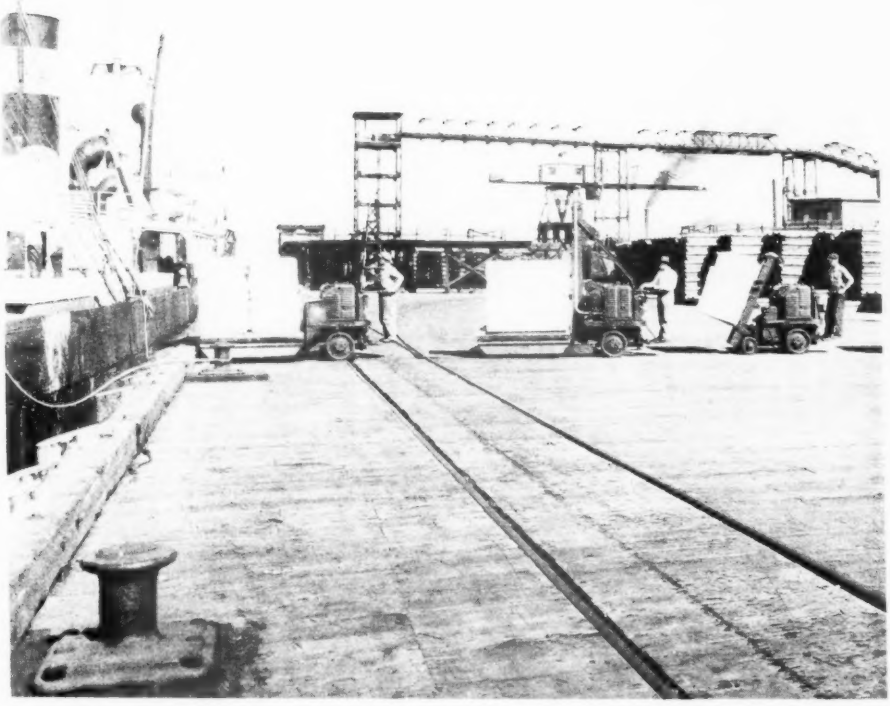
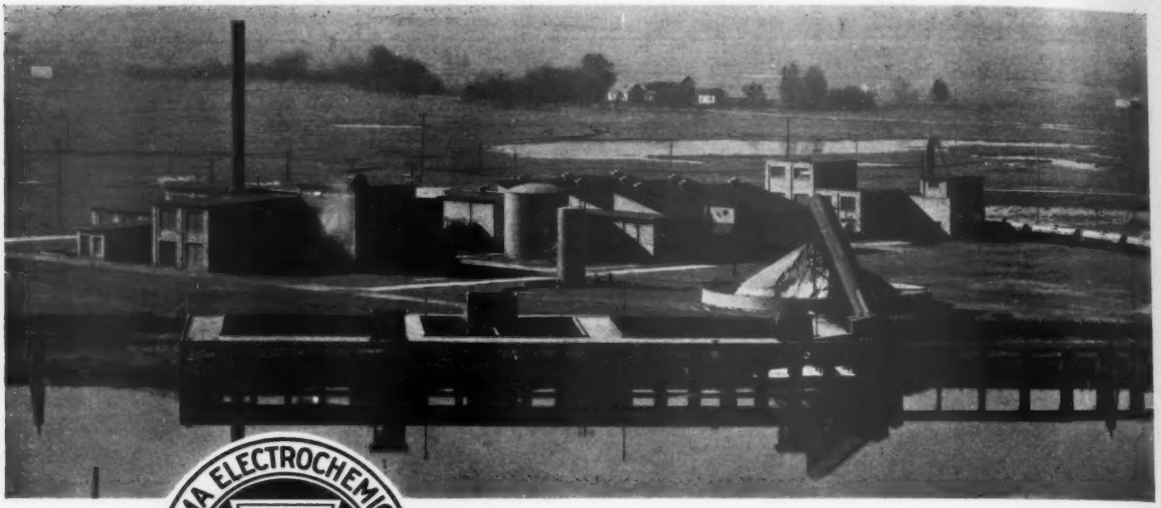


Pacific Coast Wood Pulp Moving To World Markets

OCTOBER + 1931

LIQUID CHLORINE



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KEYSTONE BRAND
TACOMA, WASH.
SUBSIDIARY PENNSYLVANIA SALT MFG. COMPANY

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TACOMA, WASHINGTON

WESTERN DIVISION OF PENNSYLVANIA SALT MANUFACTURING CO.

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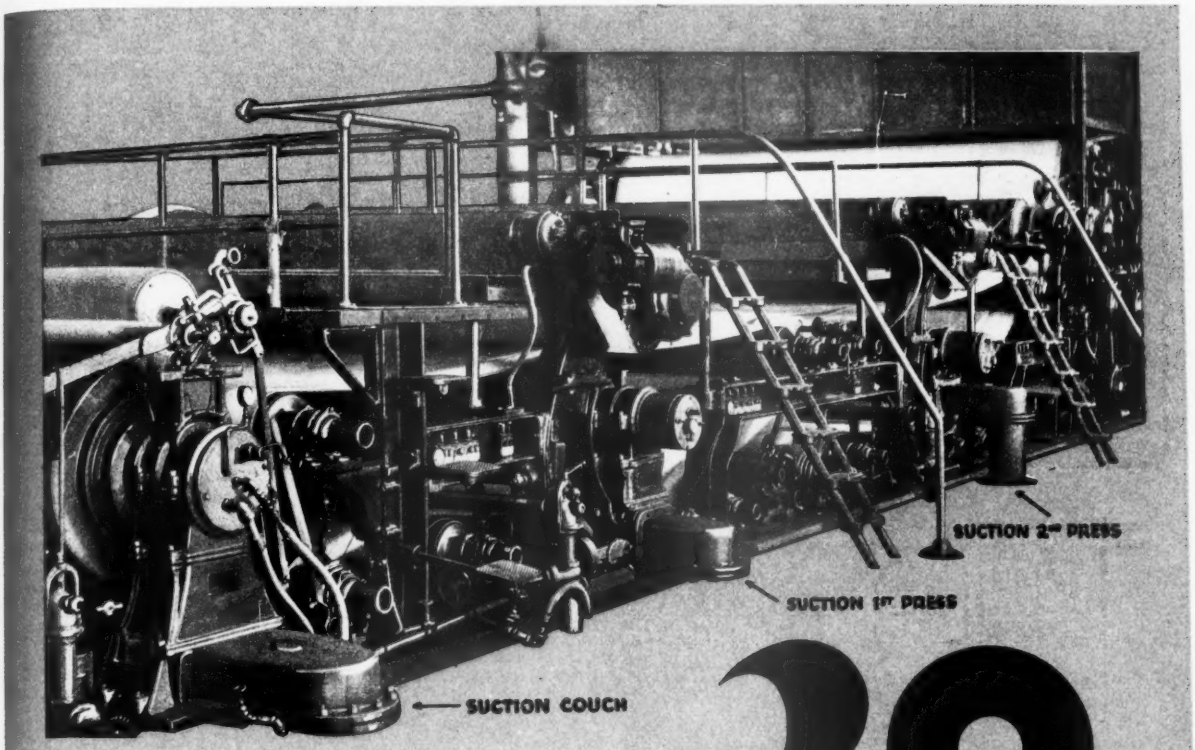

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of using SUCTION PRESS ROLLS

1. It is more economical to remove water from sheet with the *suction press* than with steam. By decreasing moisture-content going to dryers, paper requires less steam for drying, thus using less steam pressure.
2. A suction first press is suitable for all grades of paper—book, bond, kraft, tissues, hanging and wall papers, water finish papers, wrapping, specialties, newsprint, etc.
3. Assures more even moisture in sheet going to dryers, and helps eliminate cockling.
4. Eliminates use of flat-box under felt and sheet, increasing felt life and saving power.
5. Does away with use of one felt-roll between couch and press.
6. When used as first and second presses, makes third press available as a smoothing press, or third press can be removed and dryers added in its place. A very economical change on a machine short on drying capacity.
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8. Lowers felt costs per ton of paper produced.
9. Increases tonnage production.
10. Lowers operating costs.
11. Cuts power costs. Cost is less than with plain presses and considerably lower than with old-type suction presses.
12. Increases speed.
13. Where installed on pick-up felt machines or any machine giving trouble with crushing and blowing at presses, it will usually better the formation of the finished sheet.
14. Assures smoother operation and the last pound of production possible on your present machine.
15. Improves finish by reducing felt marks in sheet to the minimum.
16. Improves quality by assuring uniform drying across the sheet.
17. Keeps felt clean, eliminating mid-week shut downs to wash felts.
18. Second suction press removes more water from sheet than two plain presses.
19. When suction press is rubber-covered a further saving in felt costs is realized. It also makes it possible to use a hard top-roll of granite or recently developed composition covers.
20. Reduces shrinkage of sheet.

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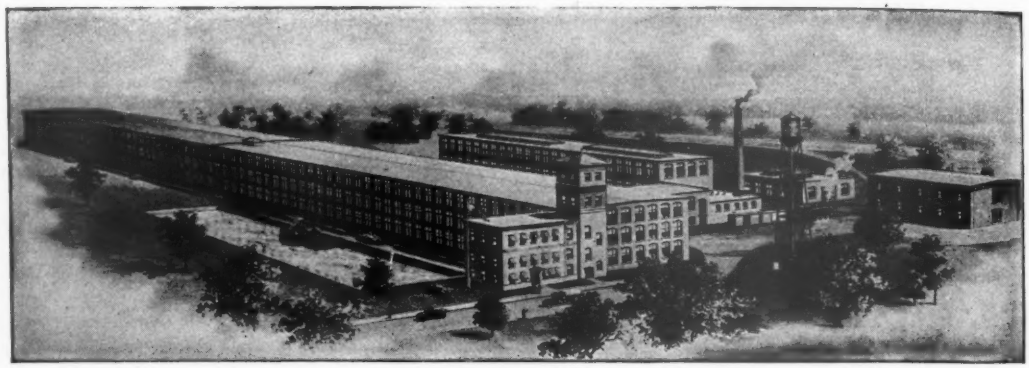

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Albany has kept in close touch with every new development and constant study has led to the perfection of all sorts of felt designs for use on every type of pulp-making machine.

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Use of a *Free Vane*, floating between twin air jets, gives temperature control without distortion

EMPLOYING a unique and revolutionary principle of operation, this new BRISTOL *Free Vane* Recorder Controller marks an almost incredible advance in air-operated automatic control. It makes possible regulating the temperatures of industrial processes to a degree heretofore unobtainable.

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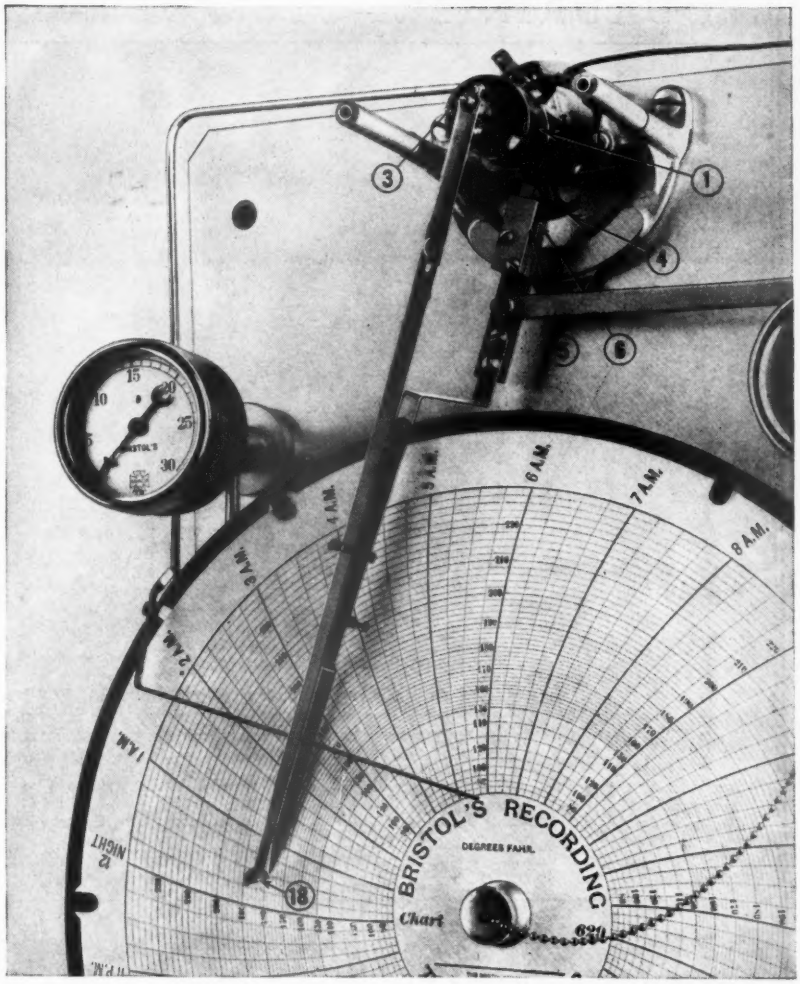
The *Free Vane* Recorder Controller *gives precisely the control which the temperature record indicates.* It incorporates BRISTOL'S perfected sensitive actuating element of the popular helical tube type which has been so widely accepted by industry as the standard of accuracy.



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A vane (4) is attached to the same shaft (3) as the recording pen arm (18). As the temperature to be controlled varies and actuates the sensitive helical measuring element (1), the shaft (3) turns and so causes the vane (4) to pass freely between the two opposing air jets (5) and (6). The discharge of the two nozzles is throttled and a back pressure is created which is utilized in effecting control without placing any restraint on the recording and controlling mechanisms.

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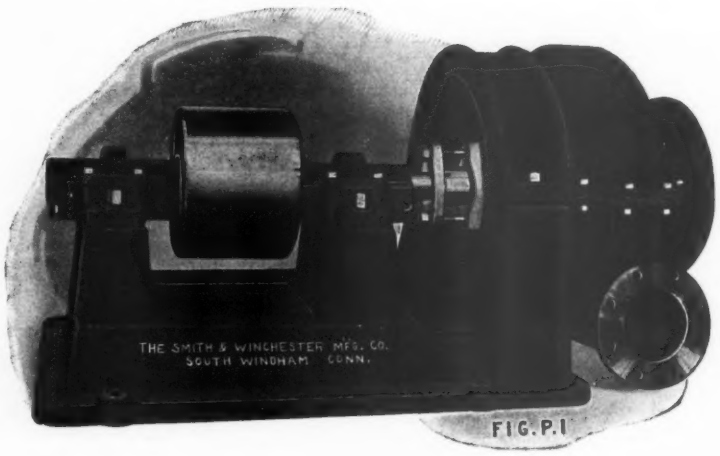
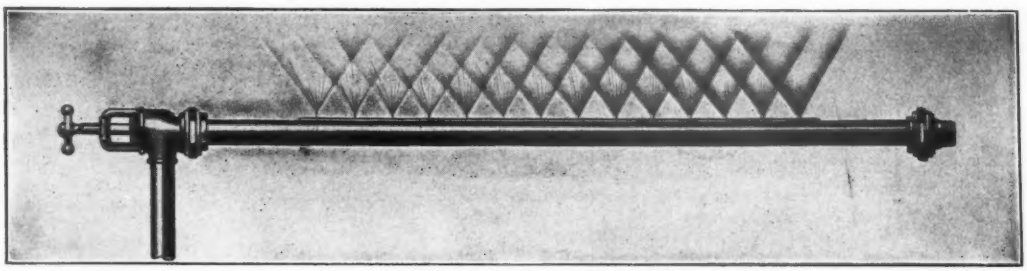


FIG. P.1

The Undercut Trimmer

PAPER BAG MAKING MACHINERY



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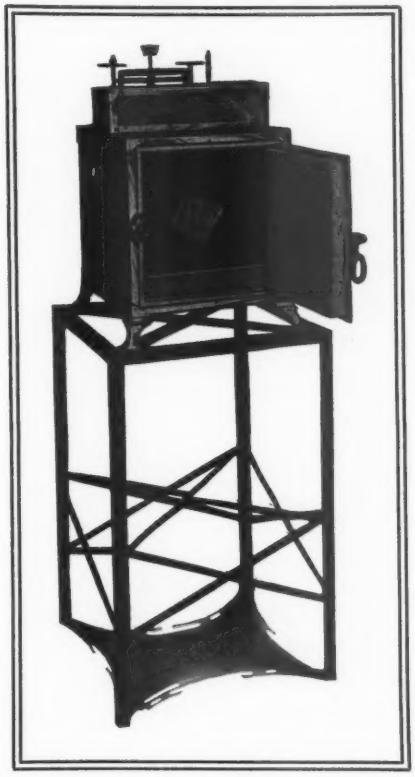
An Accurate Moisture Test of Your Paper in Ten Minutes

One Paper Company Has Bought 21 for Their Various Mills

Moisture tests can be made in your Machine Room by your Machine Tenders.

No calculations required. Accurate to .1 of 1%.

Tests all kinds of paper from tissue to board.



Hot samples weighed without removal from oven. No chance for moisture absorption during weighing.

Double-walled electric drying oven, with thermostat control.

Accurate scales with non-rusting agate bearings and beam graduated to read percent moisture directly.

Over-dried Paper Costs You More Dollars Per Ton and Dissatisfied Customers

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THAT SHOULD GUIDE YOU TO THE CHOICE OF A G-E SECTIONAL DRIVE

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The General Electric sectional drive is complete in every detail, including motors, gears, couplings, bases, speed regulators, full-automatic control board, machine-room meters, and Selsyn draw adjustment from the front side of the machine. It is engineered to meet all your requirements and to permit ease of installation.

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Speed regulators mounted on the control board, where they belong — away from the machine room. The G-E speed regulator is of the compensated Selsyn type, giving uniform speed of response at all operating speeds and providing an infinite number of control points.

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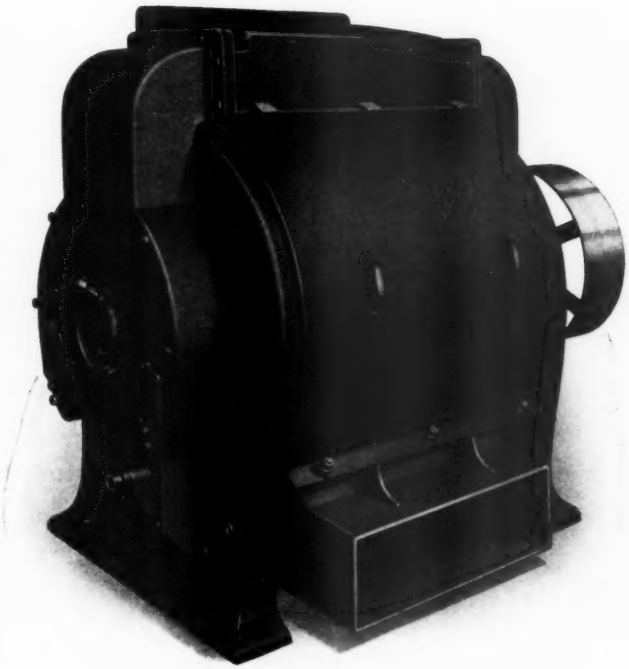
For Low Cost Handling of
—PULP—
THE REED-SPAFFORD SCREEN



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Rugged strength combined with enduring softness and openness, uniform surface and long life—these attributes of all Kenwood Board Felts are equally important at both the wet end and the presses.

Kenwood Felts assure utmost water removal and provide for the higher speeds today's production demands. With all felts co-related —all Kenwoods—all built to work with one another—the board machine reaches new standards in efficiency.

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KENWOOD FELTS

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Into the Sewer

PREVENT FIBRE LOSSES WITH OLIVER UNITED FILTERS

You won't find many superintendents tossing five-dollar bills into the plant sewers, but very often several times this amount of money is being wasted in paper mills every day, as a result of preventable fibre losses. You can cut such losses in your plant to their lowest point with Oliver United Filters.

When operated as Decker-Washer-Savealls, Oliver Uniteds function as recovery units. Used as brown-stock washers, bleach washers or kraft washers they also prevent fibre losses. Black liquor which has passed through Oliver United Filters contains less than 0.2 lbs. of fibre per 1000 gals., and evaporation costs are thus materially reduced.

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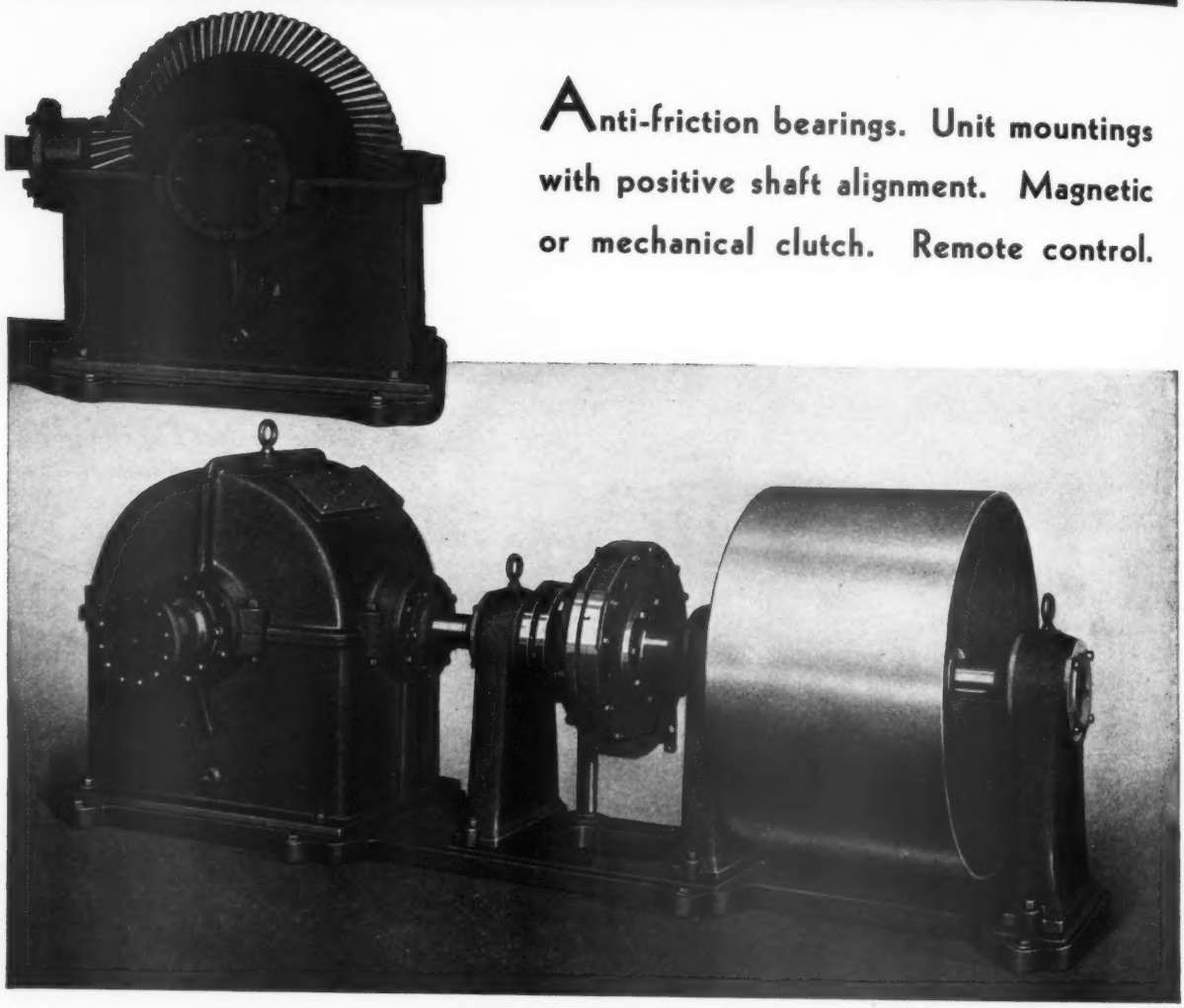

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THE BACKGROUND OF PULP AND PAPER

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The Government Defines Its Policy

with Respect to

Alaska's Pulp Timber Resources

There is presented herewith a "Memorandum for the Secretary" prepared by L. F. Kneip, Acting Forester, U. S. Forest Service, for Arthur M. Hyde, Secretary of Agriculture.

The memorandum was developed as a response to the recent appeal to President Hoover by the American Paper & Pulp Association to place the pulp timber resources of Alaska in indefinite reserve.

The memorandum is the answer of the Federal Government to the Association's request. Because it defines the government's position and establishes a fundamental policy for future action the memorandum is here recorded.

UNDER date of July 24, Mr. Jesse H. Neal, general manager and treasurer of the American Paper and Pulp Association, requested the president to direct a postponement of pending arrangements for the sale of national forest stumpage for wood pulp production in Alaska, on the ground that such sale would come into competition with existing sources of wood pulp supply and paper production which are alleged to be now suffering from a general condition of depression and overproduction. Since that date other letters have been addressed to the president or his secretary, Mr. Richey, by Mr. Neal, and others interested in pulp and paper production. In all probability further requests or demands of similar character will be presented and it, therefore, seems desirable to advise you in detail of the situation so that you may determine the course of action which should be followed by the Department in the circumstances.

As the established federal agency for the conservation and development of the forest resources in the United States, the function and purpose of the Forest Service is to aid in the promotion of conditions under which the forest resources will permanently contribute in maximum degree to the economic and social progress of the nation and its people. Discrimination between private and public forests or between the public forests of one region and those of another would be wholly contrary to the spirit and purpose of the Forest Service. Less than one-fourth of the timber-producing area of the United States is under federal control and privately-owned forest lands obviously will always be a major source of timber supply. The conservation of the economic integrity of such lands, and of the wood-using industries dependent thereon, therefore is recognized as a major responsibility and obligation of the Forest Service. However, the populations and industries dependent upon publicly-owned sources of timber supply are in equity entitled to relatively favorable consideration. A further circumstance is that the Forest Service, as a unit of the Federal Government, necessarily is bound to consider the political relationships and economic needs of the several states and territories of the Union and to avoid any arbitrary exercise of authority which would react adversely against the welfare of any such state or territory.

National Interest

Alaska is a territory of the United States. Its people are American citizens. Its economic and social advancement is a matter of national interest and concern. Its lack of complete self-government establishes an additional obligation upon the nation to avoid creation of conditions inimical to its welfare.

The development of Alaska has been in the face of many handicaps. Its early wealth of placer gold largely has been exploited and a number of circumstances have militated against the development of lode mining to a compensatory degree. Proper conservation of its seal and fisheries resources compels limitations upon their exploitation. Fur production, by trapping or farming, does not seem to afford much larger possibilities for expansion. Agriculture has its limitations due partly to climatic and soil factors, partly to the competition of the products of the continental United States and partly to world conditions. The people of Alaska therefore are confronted with many serious problems in their efforts to hold the gains already made and to properly build up their social and industrial institutions.

A Major Resource

One of the major resources of the territory is the stand of virgin timber within the Tongass National Forest. This timber is well adapted to the production of wood pulp and is situated in close proximity both to extensive hydroelectric power resources and cheap tidewater transportation. It is a renewable resource since under good silvicultural management it may be expected that the removal of the virgin growth will be followed by natural replacement of equal or greater volume and value. This timber, therefore, constitutes the potential basis for a large and permanent industrial development, capable of supporting a consider-

A timbered valley along one of Southeastern Alaska's coastal rivers.

able population and of annually contributing a large income to the territory.

The people of Alaska for many years naturally have been eager to have this timber resource exploited but the earlier position of the Forest Service was that a haphazard and speculative exploitation of the timber would react adversely against the best permanent interests of the territory and that the sale of the timber should be deferred until a clear-cut economic need and justification for the operation was demonstrated and there was adequate guarantee that it would be conducted in a systematic and constructive way by agencies technically and financially qualified to establish a permanent industry.

Applications Filed

Several years ago the conditions believed by the Forest Service to be essential to the development of this stumpage began to assume definite form. Applications were received from persons of unquestioned financial and technical ability to conduct the proper kind of an operation. Careful surveys demonstrated the existence of both timber and hydroelectric resources of ample volume. The general condition of the pulp and paper market and the then prevailing price of newsprint indicated that there was sound economic justification for an operation such as was proposed. All preliminary questions were adjusted by conference and negotiations. Definite applications, both to the Forest Service for the stumpage and to the Federal Power Commission for the related hydroelectric resources, were filed and approved. A new and more hopeful outlook for Alaska seemed imminent.

Economic Conditions

Economic conditions of the last two years have militated against the fruition of this subject. The two applicant companies involved have not completed their applications either for the stumpage or for the associated waterpower privileges. The supply of wood pulp and paper available to the United States both from local and from foreign sources has increased in proportion to demand and the price has decreased. This is not due to domestic conditions exclusively but in large degree to the importation of pulp or paper from other countries. Notwithstanding these temporarily prevalent circumstances, however, there has been no definite abandonment by the applicant companies of their plans for the development of the Alaskan stumpage and there is still a possibility that, barring negative action by the Federal Government, the utilization of the Alaskan timber in the manner proposed may yet become practicable.

The request of the general manager of the American Paper and Pulp Association, if approved, would clearly preclude such possibility of economic development in Alaska until some time in the remote future. For the time being, the people of Alaska would lose an important opportunity to realize an affirmative return from the natural forest stumpage, in offset to the cost of its protection and administration. The productive capacity of the forest soils would remain latent and unutilized, since growth would be offset by decay. The statement, that Alaska's natural resources would be prematurely depleted and result in shortsighted waste if operation is permitted in the near future, is entirely unwarranted. Under the projected plan of timber management utilization would be followed by quick replacement and new timber production. This cutting has been definitely planned on a sustained yield basis and an ample margin for safety allowed.

Imports

These are the unfavorable aspects of the proposed policy of restriction of timber utilization within Alaska. The compensating benefits are conjectural. It is conceded that the supplies of wood pulp and newsprint are now abundant and the prices are substantially below the high levels of a few years ago. However, this overproduction, to the extent it exists, is due largely to importation from other countries, which presents the question of whether it is best to favor the industrial operations which have been founded upon such importations, or to insist that the Territory of Alaska is entitled to full consideration with these other sources of wood pulp and newsprint and, therefore, will not be placed under any restrictions of other than those of economic law and principle.*

A comparison of imports from Canada and Newfoundland to the United States with production in the United States during the years 1926 to 1930, inclusive,

indicates a gradual falling off in production in the United States as against a rather rapid increase in importation from Canada. (The rapid falling off in 1930 of both imports and production was undoubtedly the result of the present depression). In view of this indicated trend it can reasonably be expected that with the lifting of the present depression there will continue to be an increase in importation from Canada. Such being the case it is difficult to see where Alaska's place in the picture of newsprint production will ever be conceded by her competitors. It appears logical to the Forest Service that Alaska be given an equal opportunity with Canada to liquidate her vast holdings of high-grade pulpwood. A comparison of imports with production follows:†

In planning for the utilization of the Alaskan timber resources the Forest Service carefully determined and prescribed the conditions which would preclude speculative applications and development and would appeal to and would be met only by conservative investors whose operations would be sound economic bases and only as justified by the supply and demand for wood pulp and newsprint. If, as it is now alleged, the full needs of the American people can be met more cheaply and effectively from other sources of timber supply than Alaska it is wholly improbable that developments in Alaska will occur until that condition has passed and there is a well demonstrated need for the new production.

No Arbitrary Restrictions

The position of the Forest Service, therefore, is that from the standpoint of the welfare of Alaska and its people, from the standpoint of good forest management, and from the standpoint of good financial management, the early utilization of the timber resources of Alaska to the extent warranted by legitimate demand, is in all respects desirable and deserving of proper encouragement by the Federal Government. It should not be checked by any arbitrary exercise of the powers of the Federal Government over the national forest lands or of the territory as an entity. On the other hand, nothing should be done to artificially stimulate or force such development in ways which are economically illogical. By leaving the matter to the free play of economic laws its eventual solution will be reached with minimum injustice to the people of the territory and to the nation as a whole. If it is true as alleged that there is now an oversupply of wood pulp and newsprint paper, that the price at which it is sold is so low that only a few mills can make a profit, and that the need of the American people for newsprint can be more cheaply and effectively met from sources other than Alaska, then there is hardly any probability whatever that the Alaska timber will be developed. If to the contrary these allegations are not borne out by the actually prevalent economic conditions, then a restriction upon the Alaskan development would be difficult of justification to the people of the territory or of the nation. It therefore does not appear that there is need for administrative restriction.

*At this point the memorandum quoted in detail statistics covering the imports, by countries, of news print entering the United States, together with domestic production for the calendar years 1929 and 1930. Because of the familiarity of the trade with these statistics they have been here omitted to conserve space.—Editor.

†The memorandum here quotes imports of news print into the United States from Canada and Newfoundland for the years 1926 to 1930 and contrasts them with United States production in the same years. These statistics, too, have been omitted here to conserve space.

Water power and timber go hand in hand in Alaska

Paper Products Firm Organized at Hoquiam

Formation of a new selling company, to handle specialty products of the Grays Harbor Pulp & Paper Company, Hoquiam, Washington, was announced on October 2 by W. S. Lucey, resident manager of the concern. The new company will be known as the Stewart Paper Products, Inc.

The products to be handled by the concern include cash register rolls, adding machine rolls and other paper produced for special types of machines. The company will sell to wholesalers only, Mr. Lucey announced.

The concern has been incorporated and is capitalized for $50,000. Lowell P. Mickelwait and DeForest Perkins are the incorporators. The main offices of the company will be located at Hoquiam.

Shaffer Mill Running at Good Capacity

Production continues at a high rate at the unbleached sulphite pulp mill of the Shaffer Box Company at Tacoma, Washington. Altho the mill has a rated capacity of 50 tons per day, under the careful coaxing of A. D. "Dad" Wood the mill is now producing regularly about 60 tons per day. The mill for some time has been operating at this high rate of capacity.

The quality of Shaffer pulp is being steadily improved, Mr. Wood points out, and a consumer acceptance is being developed favorable to the Shaffer organization. Meanwhile at the mill there is a constant program of improvement of plant to bring about lower costs of production and improvement of product.

New tissues

by the

PACIFIC COAST PAPER MILLS

Backed by

J. J. HERB

Forty years of paper making

BELLINGHAM shoppers paused one September day recently to look at attractive window displays. The featured item was a new roll of pure white, soft tissue, attractively wrapped to give that impression of rigid cleanliness demanded by the medical profession. The brand name, "M.D.", of the roll was announced to the public for the first time in the Bellingham window displays.

The hurrying shoppers might have attached less significance had events been other than they were. Here, however, was a new product, the development of a local industry, making its first appearance in competition with what the world had to offer in that line. Here was a definite mark of achievement for its own Pacific Coast Paper Mills, a payroll which had been planted in the Northwestern Washington city just four years before.

From the standpoint of the paper industry on the Pacific Coast the announcement of the Pacific Coast Paper Mills of Bellingham placing the new "M.D." tissue roll upon the market is significant in that it marks the entry of this thriving mill into new position in the distribution field. The "M.D." roll is the mill's own brand and will be pushed as a utility tissue in the bathroom with the help of an advertising campaign.

Back of the "M.D." roll there is a history of some 40 years of experience in a family of paper makers. Appleton, Wisconsin, has long been known as an important paper mill city. Four decades ago a young man got a job in the Wisconsin Tissue Mills of that city. It was a very mediocre job, consisting of managing the business end of a broom.

The job of sweeping out, however, was the genuine bottom rung of a paper making career which was to lead steadily upward. Before J. J. Herb left the Appleton mill he had worked his way right up thru the production department to be superintendent of the mill. Then came a shift in scene with the Herb family moving to St. Catherines, Ontario, where the Interlake Tissue Mills became the scene of action. That was in 1911.

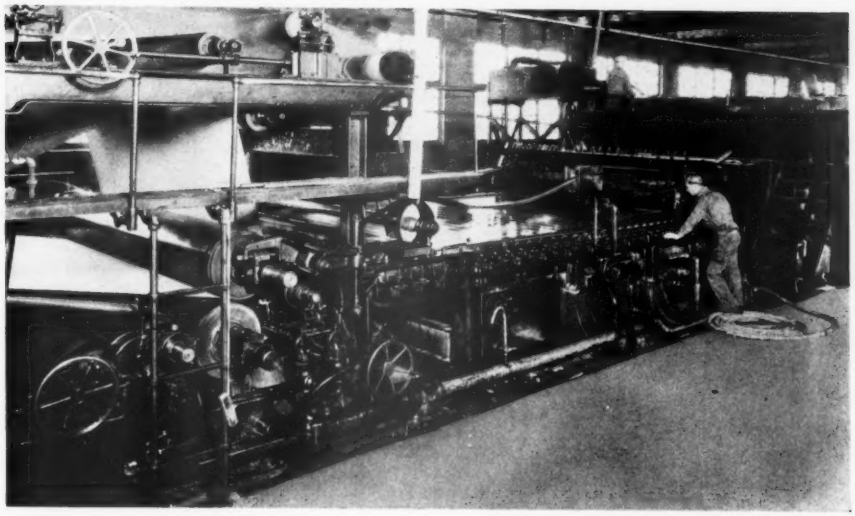
Following some ten years at St. Catherines the Herbs went to New Westminster, British Columbia, an industrial port some dozen miles or so from the Western Canadian metropolis, Vancouver. Here the Westminster Paper Mills Ltd. were established by Mr. Herb and associates to manufacture a varied line of tissue papers and converted items. The New Westminster mill, recently completely rebuilt after a disastrous fire, continues to be operated in flourishing fashion under the presidency of J. J. Herb.

Bellingham came into the picture in the Fall of 1927. Negotiations began some time prior to that, but it was in the Fall, just four years ago, that the Pacific Coast Paper Mills began the manufacture and conversion of a line of personal utility papers. The mill upon first starting produced both crepe and smooth toilet papers, in rolls and flats, and paper towels.

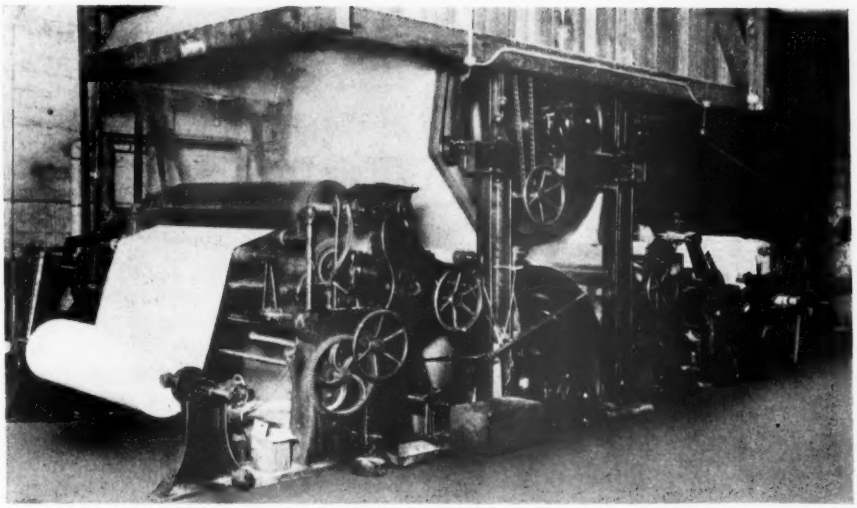
A new reinforced concrete building was constructed to house the paper manufacturing department. The principal equipment here consisted of a 76-inch Black-Clawson fourdrinier paper machine. The output was about 10 tons per day, dependent upon grade produced. Other complementary equipment consisted of screens, jordans, beaters, and a creping machine. The mill purchased its steam and power requirements.

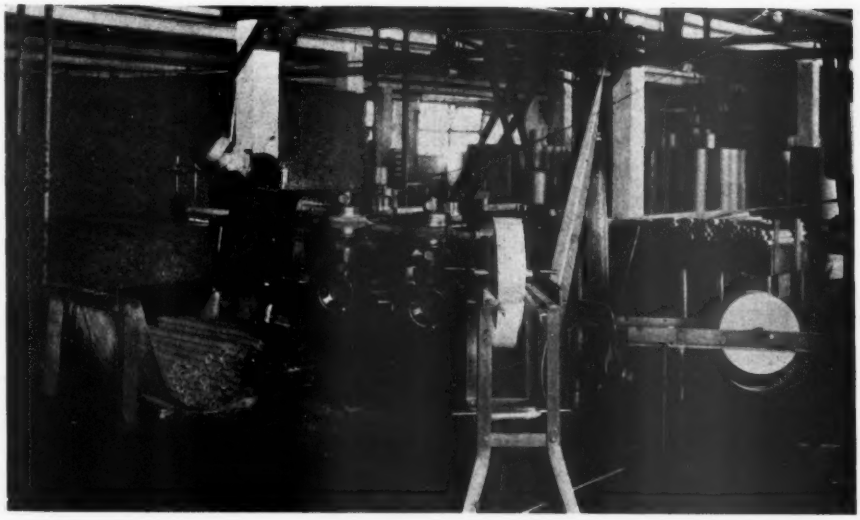
The plant consists of two principal buildings, the paper mill proper and the converting plant and warehouse. The paper mill is a two-story building, with the paper machine on the upper floor, and the drive and auxiliary equipment on the lower floor. The mill site has direct rail connections, is close to municipal deep water docks, five minutes' walk from the heart of the business district of Bellingham, and favored by freight busses operating on the main Pacific Highway which passes thru Bellingham.

Since first beginning manufacture in 1927 the mill has been consistently improved by the investment of a substantial total sum for refinement of equipment. The line of products has been steadily widened. The company recently put on the market an interfolded toilet tissue for dispensing in cabinets, and this item quite rounds out its line of personal utility papers — toilet



The fourdrinier end of the tissue paper machine at the Bellingham mill.





Above — A view of the creping machine and, below—A corner of the core making room.

V. A. HUGHES

PAUL HERB

P. J. ONKELS

rolls, interfolds, and flats; several grades of paper towels. Both bleached and unbleached varieties are offered.

The Pacific Coast Paper Mills purchases it pulp entirely from Pacific Coast mills, the greater bulk of it coming from Washington. It has one source of unbleached sulphite pulp at its very back door, for the 90-ton unbleached sulphite pulp mill of the Puget Sound Pulp & Timber Company is scarcely 100 yards away.

It has been mentioned earlier in this story that the Pacific Coast Paper Mills is a family affair. Mr. J. J. Herb is the father of three sons, all of whom are now actively identified with the business. Elmer is a graduate of the University of Washington. His special leaning has been in the administration field. He was for some time in charge of the sales division of the Bellingham mill, but in the past year or more he has transferred his activities to the affiliated New Westminster mill and is now assistant to J. J. Herb, in charge of operations there.

Paul Herb showed early leanings for the mechanics of paper making. In his earlier years he was to be found down in the producing end of the mill whenever he was not in school. During school vacations and in between times he steadily added to his store of practical operating knowledge, becoming a machine tender when still quite youthful. Paul is now vice president of the Pacific Coast Paper Mills and in charge of the Bellingham operations, including both manufacturing and sales, under the guidance of his father, J. J. Herb.

The third son to enter the business is relatively a new comer. He graduated from the School of Business Administration at the University of Washington last June. He carries the initials of F. J., but is seldom called by other than the name "Bill".

P. J. Onkels is mill manager at Bellingham, and V. A. Hughes is secretary and office manager. The plant carries an average of 60 full time employes.

There is a considerable pride in the product at the Bellingham mill to which can largely be charged the unusual success this plant has had in maintaining unusually steady operations in the four years of existence. Mr. Paul Herb points out that an overseer is placed on each shift in the converting plant whose sole duty is to effect a rigid inspection to see that goods are up to standard. This policy of inspection has led to the adoption of the unwritten slogan at the mill, "if it isn't perfect, cull it."

The manufactures of the Pacific Coast Paper Mills are distributed thru many channels, practically the entire output being marketed in the Western states. Hitherto the output has been moving to the consumer under a number of dealer brands, but with the introduction of the "M.D." roll the organization is stepping into a new era of marketing in which it will bring forward the merits of its products in its own name.

Here is a view in the finishing room where the product is wrapped and packaged for market.

T·A·P·P·I

to meet at Powell River

VICE Chairman H. Andrews of the Pacific Coast Section of TAPPI, who is assuming general direction of the Powell River program, announces that the stage is set for the Fall meeting on Friday, October 23rd, at Powell River, B. C. The program is subject to minor revisions, but the general outline of proceedings will be as follows:

Thursday—

11:45 p.m. Delegates leave Vancouver, B. C., on S.S. Princess Royal.

Friday—

7:30 a.m. Arrive in Powell River.

9:00 a.m.—Delegates assemble in Dwight Hall for the Morning Session.

1:15 p.m.—Group photo at entrance of Dwight Hall.

1:30 p.m.—Delegates will assemble outside Dwight Hall. Cars will drive the delegates to the new hydro-electric development at Lois River.

2:00 p.m.—Delegates arrive at Stillwater Crossing, where they will take the train to the new site.

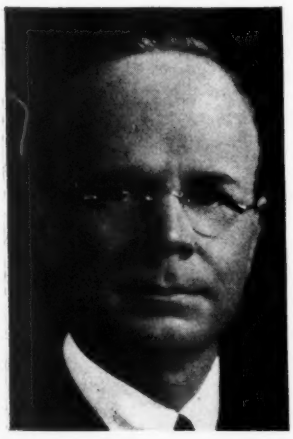
4:00 p.m.—Return to Powell River.

4:00-5:00 p.m.—General inspection of Powell River plant.

7:00 p.m.—Delegates assemble at Dwight Hall for evening banquet.

11:15 p.m.—Leave Powell River.

The morning session will as usual be devoted to the reading of technical papers.



C. W. MORDEN
Chairman
Pacific Section
of
T.A.P.P.I.

A. H. Lundberg, who has recently returned from Sweden, where he made an exhaustive study of Swedish mills, will elaborate on the Brobeck Circulating System and other phases of the technical situation in the Swedish mills.

HOW TO GET TO POWELL RIVER

As Powell River can only be reached by boat it is necessary that delegates to the Fall meeting of TAPPI reach Vancouver, B. C., on THURSDAY, October 22, in time to embark on the Canadian Pacific Steamship Princess Royal leaving Vancouver at 11:45 p. m. Thursday. The steamer lands its passengers in Powell River in time for breakfast Friday morning, and departs Friday evening at 11:15 o'clock.

H. W. Nightingale, Washington State Sanitary Engineer, will discuss the Ozone Treatment of Waste Sulphite Liquor, in which branch of technical endeavor he has engaged in extensive research over the past several years.

J. H. Jenkins of the Canadian Forest Products Laboratory, University of British Columbia, will make his first appearance at a TAPPI convention. Mr. Jenkins is an authority in the Forestry field and his researches in connection with sawmill waste will undoubtedly prove both interesting and instructive to a pulp and paper convention.

As suggested in the above itinerary, delegates will have the afternoon free to inspect the Powell River Company's hydro-electric development at Lois River, and will see the latest 226-inch newsprint machine in operation. This seventh machine, installed eight months ago, is at present the last word in newsprint machines on the Pacific Coast.

Cars will be on hand after lunch to drive the delegates to Lois River via the suburbs of Cranberry and Westview, whose development has been one of the features of community life in the Powell River district in the past five years. At the Lois River crossing a logging train will carry the delegates a mile and a half to the site of the new temporary dam.

The wind-up banquet in the evening will be held in Dwight Hall, which will be featured by the addresses of R. Bell-Irving, Powell River Company resident manager; Dr. Jahn of the University of Idaho, and Mr. Lawrence Killam of the B. C. Pulp & Paper Company. A brief musical program will round off the evening.

Notices of the meeting have been posted to all members of the association. The program is a well balanced one and combined with the opportunity of inspecting the Powell River Company's new works should prove attractive to the delegates.

It may also be mentioned that Powell River possesses a very sporty nine-hole golf course and any of the delegates wishing to combine business with pleasure can stay over until the Sunday night boat. Fishing is also particularly good on Powell Lake at this time and the hunters are bringing in the odd deer and bear from the hills surrounding Powell Lake.

Alloys of Steel

are proving themselves to be

Allies of Industry

By RAY SMYTHE
Manufacturers' Representative,
Portland, Oregon

EXPERIMENT with and manufacture of acid-resisting and non-corrosive steel started some years ago in the steel mills, but not until its sale was exploited in a large way, did the general buying public appreciate the magnitude of the impending change in the use of these alloys. The extent of the application of special steels in the pulp and paper industry is truly most remarkable. During the past year exceptionally great strides have been made.

Manufacturers of pumps have had considerable difficulty in producing equipment which would withstand the corrosive action of the pulping liquors. Consequently, shafts, runners, and other parts were being frequently replaced.

With the adoption of Krupp-Nirosta type of steels, these parts may now be made so that frequent replacements are unnecessary, and the purchaser may expect a greatly increased use and life from pumps. At the same time, the buyer is pleasantly surprised to learn that the cost is only slightly increased. Several of the pump manufacturers have adopted the acid-resisting steel as standard practice, because of the economical utilization of these steels and the positive elimination of many trying operating troubles.

One of the largest problems in any pulp and paper mill is the safe and positive transfer of the various processing liquors from one department to the other. Frequent replacements of ordinary black steel or wood stave pipe has paved the way for alloy steels. Pure iron was next experimented with. It served very well. Special acid-resisting paints were later tried.

The copper and brass industry then advocated the use of their metal to replace steel. This was another forward step, but it was very expensive material to use as compared with the ordinary type of piping, and in addition lacked strength for some specific purposes. The process of leadizing of ordinary steel pipe seemed to solve the problem very well, but there were difficulties in getting a perfect application.

It appears that the use of the Krupp-Nirosta combinations of high grade alloy steels may really be the best solution, providing the piping is properly installed and the initial, greater, outlay justified.

One new pulp mill now being constructed has utilized much alloy piping in conjunction with wood stave. The bends, outlets, fittings, etc., are made of alloy metals, and the straight runs of piping are made of wood. It is claimed that there is a tremendous saving in labor of installation.

The more urgent and persistent demand for cleanliness in the finished pulp and the constant striving for better quality have forced the operators and the manufacturers to find something to eliminate difficulties. Necessity has effected great progress in the piping arrangements in many of the later mills.

Tubing and piping can now be had in a wide range of thicknesses and diameters and manufactured by some of the leading steel manufacturers in this country. There is hardly any application where the proper materials can not be purchased economically. Deliveries on all acid-resisting steels have been rather slow, in the immediate past, but now that a number of warehousing and sales companies have begun to stock plates, bars, pipe, tubing and shafting for immediate delivery, it is very much easier for the operator to conveniently and quickly supply his requirements.

Grinder flanges were formerly made out of cast iron, then of cast steel and now a number of the mills are buying these same flanges made of high chrome content which successfully resists the corrosive action in this service. Some operators claim that the corrosive action in the ground wood department is more severe than in the sulphite plant.

The initial cost is from two to two and one-half times that of ordinary cast steel but when the labor of dismantling and installing a new set of flanges is considered, about one change will pay for the difference in the cost, not to mention the increased production which results from continuous operation of any piece of equipment.

Condensor and evaporator tubes, especially in sulphate plants, have always given considerable trouble because of the necessity for frequent replacements. The actual labor to replace is considerable, not to mention the serious probable loss in production. In one Pacific Coast plant, it has been necessary to change the tubes in the evaporators every few months. Even the very best charcoal iron tubes obtainable did not long withstand the black liquor. As soon as available, this company installed acid-resisting tubes for this service made according to the Nirosta formula, and they have shown

a life many times that of the former tubes. The initial cost of the tubes is, necessarily, several times that of iron or steel, but the saving in labor, and the fact that the equipment is in constant operation, more than pays for any additional initial outlay.

A number of the valve manufacturers have gone to the use of acid-resisting seats and stems—and this type of equipment is having a wide use in many plants. Valves have been a source of trouble and have a way of usually failing just when they are needed the most. It has been easy for the valve people readily to change to these alloy metals; likewise convenient and inexpensive for the operators to make trial installations. One superintendent has experimented with an alloy valve in the relief line of a sulphite digester. He finds less of a tendency to "lime up" and thinks this valve superior to the ordinary brass or bronze. Certainly, if "liming up" is prevented or appreciably retarded, greater flow capacity will result.

Blowpit Bottoms

Digester neck fittings and outlet connections have usually been made of cast bronze which has served very well until the advent of the acid-resisting steels. Now a number of mills are installing these same fittings made of acid-resisting steel. It is claimed that the life is very much longer and if this proves to be true, after practical operation, they will be found to be less expensive.

Blow pit bottoms have been a source of trouble. The materials used have worn out, prevented quick drainage, or caused dirt in the pulp. Several of the recently constructed Pacific Coast mills have used blow pit bottoms of KA-2 material, No. 16 gauge, secured to timber supports by lag screws made of the same acid-resisting material. In every instance, these have proven most satisfactory and seem to be gaining great favor with the operators, as better drainage is obtained, and replacements and shutdowns eliminated. Because of the fact that very thin, non-corrosive material may be used, the cost is little more than for other low cost materials of heavy section type.

Ultimate Results

On a pulp washer recently installed at one of the kraft mills, a comb was used made of acid-resisting steel for cleaning the pulp from the strings. It was necessary to use such a rust proof metal in order that the pulp would remain clean. Damage to the strings by contact with rough, rust-covered fingers of the comb would also have been a source of trouble.

It is very important that good judgment be used in determining whether or not the material entering into a piece of equipment is to be made of a higher cost, acid-resisting steel, or other ordinary metals. It is extremely necessary that consideration be given to the ultimate results rather than immediate cost. It is sometimes difficult, mathematically, to actually show the saving, but the operator intuitively knows whether a certain process or material is cheaper in the long run than some other and usually he has to rely upon his intuition, judgment and experience. Especially is this true when considering acid-resisting steels.

So far, the tendency seems to be for the operator to feel his way carefully and not make a radical departure from former methods until he is sure that such a change will prove economical and successful. The rapidly changing chemical treatment of pulp wood and the extreme potential probability of radically changed methods of manufacture should not be overlooked when deciding upon a change of steel specifications. It is not too much to expect that in the highly skilled, technical research now being conducted by the ablest men in the industry, that changes in equipment and processes will be far-reaching.

When the alloy steels first came into demand, the manufacturer did not know how properly to machine them. The limited knowledge of proper cutting tools and lubricants made it difficult to accurately estimate the machining costs. The foundries were having difficulty in producing castings with machinable characteristics. Naturally, the manufacturing expense was high, and rejections numerous. The increased cost to the consumer was more than he could stand.

"To the alert will come the rewards," says the author of this article. He has been actively identified with the iron and steel business for many years and has an exceptional acquaintance with the pulp and paper industry on the Pacific Coast. "Many manufacturers of so-called standard equipment," he points out, "using former methods and materials, may eventually discover they are in the 'livery stable business' unless they have the imagination to visualize the change taking place in all lines of manufacture."

These difficulties have been overcome to a large extent, and the finished valve, pump, or what-not, has little additional labor cost involved in its processing. The large bar and plate mills have tried to anticipate every possible trouble with re-manufacturing and now give complete directions and procedure for every conceivable handling and fabricating of these steels. All mystery has been taken out, and it is now as easy to machine these alloys as any other steel.

The use of these special steels has affected the design of machinery to a large extent. It has made it possible to think of new methods and ways of doing work around the pulp or paper mill formerly impossible because the materials did not stand up under the operating conditions.

Machinery builders have recognized the advantages of using alloy steels, but have usually been unable to incorporate them in their equipment designs because of the reluctance on the part of the purchaser to pay the increased cost. It is a serious matter, for either the engineer or the owner, to decide on greater initial outlay during the construction period in order that production costs in the future may be lowered, but the decision must be made.

Luckily for all concerned, the apathetic attitude concerning the future is rapidly being changed to one of extreme alertness. True value, as measured in satisfactory operation, can now be stated at its real worth. The best equipment is none too good in these days of keen competition, but likewise is worth more than inferior machinery.

The application of these steels to replace other types of metal is not really the most important use to which they may be put. It is in the possibility of new design and the opportunity afforded engineers to pursue entirely new and interesting fields of equipment development that offers the highest reward for this new contribution to the art of steel making.

The continuous cooking process for sulphate and

sulphite pulp has always been a most interesting one to speculate upon, but the inability of the engineer to solve the problems because of the corrosive action of the liquors on steel plate has made it impossible, up to the present time, to pursue new thought along this line. But now that the alloy steels are made in all shapes and sizes, there has been opened a new avenue for designing engineers and chemists to attack and solve the continuous cooking of these pulps. It is not too optimistic to believe that within the next two or three years, there will be considerable change in these processes.

Comparatively speaking, few uses have been found for these alloy steels and yet it has developed into a tremendous industry, seemingly, over night. What the future holds for these metals is something to speculate upon. It is safe to say that without them, many of our modern inventions would not be possible.

Many manufacturers of so-called standard equipment using former methods and materials, may eventually discover that they are in the "livery stable business" unless they have the imagination to visualize the change taking place in all lines of manufacture. To the alert, will come the rewards.

As industry, generally, regains its position after this period of depression, the next ten years should hold greater possibilities for development and the building up of successful enterprises than in the past ten years.

Those imaginative men who are burning their midnight oil in the laboratories and work-shops of the nation are contributing a tremendous amount toward the welfare and success of the operators in the pulp and paper and allied industries. These romanticists in steel making and manufacturing are preparing the way for greater enjoyment, a more successful business period, and a better life.

New Weyerhaeuser Mill Soon To Produce

Machinery installations at the new sulphite pulp plant of the Weyerhaeuser Timber Company at Longview, Washington, were nearing completion at the end of September and prospects are that the mill will swing into production shortly. Just what the date of beginning operations will be, the management is not prepared to say.

The last building to rise on the Columbia River site was a 6,000 ton pulp storage building, a huge frame structure located adjacent to the machine room. The steamship Freida brought the first load of sulphur which was transferred into the two 750 ton storage tanks. The haul from the Weyerhaeuser Columbia River docks to the storage bins is a matter of only a few hundred feet.

In the machine room, the huge Minton vacuum dryer, second of its kind to be used for sulphite pulp drying on the Pacific Coast, was nearly assembled at the end of September and mechanics were busy on the installation of miscellaneous parts. Two huge hydraulic presses will make compact bundles of the finished pulp. These bundles will go into two tying machines similar to those used in large newspaper plants, to be bound with wire. Use of these bundle tying machines in a pulp mill is believed to be an innovation.

A conveyor belt about a half mile long will lead from the chipper plant located adjacent to one of the Weyerhaeuser head mills to the huge chip storage building. Another short belt system carries the chips to the six 15-ton digesters. The bleaching plant has 14 tile lined bleachers.

The two equalizing tanks of 60-ton capacity each, the six blow pits and vomit stacks, two upright storage chests, and numerous water tanks have been oiled and left in natural wood finish instead of being painted. These are in contrast to the gleaming white of the pulp buildings where cleanliness is to be an outstanding feature.

A complete laboratory for pulp testing is contained in one of the mill buildings. This laboratory includes a constant humidity room which will enable tests to be made with the greatest degree of accuracy. Pulp samples will be taken at all stages in the process and complete chemical and physical tests run and results recorded.

Ralph B. Hansen is technical director in the new mill. Mr. Hansen is a University of Washington graduate who later worked under Dr. H. K. Benson in the chemical engineering department of the university. His next connection was with the Rainier Pulp & Paper Company at Shelton, where he remained for three years as chemist. He was then transferred to the Olympic Forest Products Company at Port Angeles as chief chemist and comes to Longview from that position.

Edward P. Wood will be operating chemist for the Weyerhaeuser pulp division. Previous to this he was chief chemist for the St. Regis Pulp & Paper Company of Tacoma. He was at one time superintendent of the Oregon Pulp & Paper Company's sulphite mill at Salem, Oregon, and before that for several years connected with the Stebbins Engineering Company

To represent the Weyerhaeuser pulp division in eastern and mid-western territory, G. S. Brazeau and Henry F. Bigelow, Jr., will make their headquarters in offices at Chicago and Clinton, Massachusetts, respectively. For 10 years Mr. Bigelow was associated with Atterbury Brothers, Inc., of New York. Mr. Brazeau comes from the Northwest Paper Company of Cloquet, Minn. His Chicago office will be at 307 North Michigan Avenue. He has been in Longview for several weeks past.

Salem Mill Making Improvements

The Oregon Pulp & Paper Company, one of the several mills operated by the F. W. Leadbetter interests, is carrying out some improvement work at its Salem, Oregon, mill. The Austin Company has the construction contract.

One of the improvements will be the building of a settling basin in the basement under the main floor. Waste white water from the machines will be passed thru the settling basin and thru filters. The improvement is designed to eliminate water troubles experienced at times when the river is in flood.

Ostenson Visiting Eastern Paper Mills

For the purpose of studying the latest methods and innovations in paper manufacturing, Henry E. Ostenson, paper mill superintendent of the Crown Willamette Paper Company's 350-ton specialty mill at Camas, Washington, left on October 6 for a tour of Eastern paper mills. He will be gone three weeks or more.

The unusual pressure of the past two years to reduce manufacturing costs, improve quality and develop new items has injected a new pace into the field of paper manufacturing. Mr. Ostenson will make a general survey of developments.

C. E. Bruner, manager of Crown Willamette Paper Company mill at West Linn, has recovered from the illness that recently confined him to his home and from which he recuperated at Seaside, Oregon. He is back in charge of operations at West Linn.

The Posey Manufacturing Company has found that to wrap its better grades of lumber in paper is profitable

Lumber Is Now Wrapped With Paper

What markets lie ahead for the paper industry in extending the idea of wrapping bundles of finished lumber for shipment? Worth a smile only yesterday, today there are at least a half dozen major lumber manufacturers on the Pacific Coast who have adopted the idea of wrapping their better grades of lumber.

H. J. Coombs of the Crown Willamette Paper Company has recently been carrying on investigations in wrapped lumber.

As an example of what is being done one can point out the Posey Manufacturing Company of Hoquiam, Washington, which for some months now has been wrapping spruce airplane stock. Long distance shipments are reported as arriving in fine condition.

Airplane lumber is wrapped to prevent the absorption of moisture enroute. Pieces up to 33 feet long have been wrapped. In addition, the advantages claimed for wrapping are elimination of dirt and cinder stain, bruising, and surface damage. In retail yards, the lumber retains its pristine freshness where now deterioration is suffered thru exposure to sun, rain, and dust.

Mr. Coombs feels that the time is approaching when all progressive lumber manufacturers will see the wisdom of wrapping their upper grades, such as flooring, ceiling, and interior finish.

Screening Paper Used for Veneer Packaging

Screening paper produced by the Grays Harbor Pulp & Paper Company of Hoquiam, Washington, is being used as packaging material for veneer panel shipments by the Harbor Plywood Corporation of Aberdeen. The screening paper has proved very good for this purpose as the flat steel binding straps that are necessary with other forms of packaging paper are not necessary with the screening product. Kraft paper strips take the place of the steel straps and kraft paper ends lap over about six or eight inches to complete the packaging.

The shipments covered by screening paper have been consigned to Liverpool and London, England, and to Antwerp and Rotterdam on the continent.

A. E. McMaster, general manager of Powell River Company, visited California during the past month. A business trip—as "A. E.'s" trips invariably are.

Institute of Paper Chemistry Dedicates New Building

Dedication in September of the new building to house the Institute of Paper Chemistry at Lawrence College, Appleton, Wisconsin, to be devoted completely to the interests of pulp and paper chemistry, the only one of its kind in the United States is another step in the steady progress of this institution, the organization of which in 1930 received outstanding recognition by President Hoover, industrialists and educators as a distinct event in the field of American education and the paper industry.

Launched in February, 1930, with Dr. Otto Kress as technical director, the Institute opened in September with 27 students, graduates of 22 colleges and universities and residents of 16 states. It operates on a budget equal to the income from more than $1,000,000 endowment.

About $250,000 is invested in the plant and apparatus, the Institute having in its new building the finest library in America on pulp and paper chemistry, the finest arrangement of optical instruments, the finest constant humidity and constant temperature rooms to be found in educational institutions in America.

More than 225 mills and corporations throughout the United States have contributed instruments, materials, and apparatus to be used in its construction and operation.

The purpose of the Institute is threefold; it trains talented college graduates in pulp and paper chemistry, is establishing a comprehensive research library and information service for use of the paper industries and institute, is coordinating research in the interest of the whole industry.

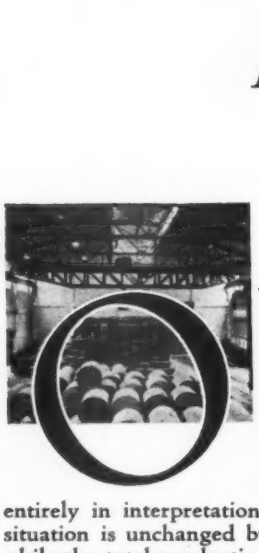
Japan's Pulp Imports During July, 1931

Japan imported chemical pulp in July from the following named countries (amounts stated in pounds): Sweden, 3,838,400; Norway, 3,376,533; Germany, 92,000; U. S. A., 4,395,067; Canada, 7,520,133; France, 290,400; Czcho-Slovakia, 65,067; other Europe, 2,540,800; total, 22,188,400 pounds.

Albert Bankus, assistant vice-president of Crown Willamette Paper Company, who was formerly in the Portland office, was in the Pacific Northwest the week of September 7 visiting all the mills.

Overproduction ---

Is it FACT or FANCY?



OVERPRODUCTION, as the term applies to the pulp and paper industry, has been emphasized out of its true proportion. The actual idle machine capacity is much less than is apparent from a casual glance at operating statistics. The difference lies entirely in interpretation of ratios. While the actual situation is unchanged by the shifting of a viewpoint, while the total production in tons remains not one whit different, the psychological effect of painting the picture blacker than is warranted is to needlessly depress the members of the industry.

In normal years, the idle capacity in the paper industry amounts to 17% to 22% of the total. In the depression year of 1921, the idle capacity equalled 37% of the total, and in 1930 it amounted to 30%*.

It is evident that even in normal times, there is a large amount of idle capacity and in times of depression the surplus naturally becomes considerably larger because of drastic curtailment of normal demand. The idle capacity in 1930 amounted to over 4,200,000 tons which is a substantial surplus.*

Good years and bad, the paper industry in the United States has operated in the 30-year period since 1900 with an average idle capacity of about 21.5%. From available published statistics it is apparent that the best the industry ever did was to get by for one year with only 14% idle capacity. That was in 1920 when mills were pressed to fill up war depleted stocks. The post war boom collapsed precipitately into a post war depression and in 1921 the industry operated with 37% of its machine capacity idle.

Obviously 1920 and 1921 were freak years, but they are part of the average. Otherwise, it is significant to note that as a whole the industry has operated within unusually close range of the period's activity average. Compared to many another major industry the paper industry is exceptionally stable.

At no time, the yearly statistics tell us, has the paper industry come nearer to theoretical 100% of capacity operations than in 1920. Even then, with orders crowded into the mills, actual output was only 86% of installed machine capacity. This is fairly good evidence that 100% operation as the standard of measurement is false and misleading, since that ideal has demonstrated itself over a 30-year period to be unattainable.

*These two paragraphs are quoted from the Weekly Business Review of the American Paper & Pulp Association for May 13, 1931.

When the paper industry is turning out four-fifths of its rated machine capacity it is operating under normal average conditions. Are we fooling ourselves by not distinguishing between idle capacity and obsolete capacity?

The psychological effect of constantly looking upward to an unscalable pinnacle—while retaining the belief that the height is attainable—is distinctly depressing. Obviously, 21.5% idle capacity sounds alarming. One machine is every five idle! Actually, however, such a state of affairs is normal.

The proposal is therefore made that the paper industry abandon the theoretical and readjust itself to the practical. Let it relocate the norm on which it bases its ratio of activity, bring it sharply down 21.5% below the 100% theoretical activity to its true place, 78.5% of installed machine capacity. Then, when the market permitted manufacture on a basis of 78.5% of the theoretical maximum the operator would know that conditions were normal. He could walk around and feel good once in a while. Physically, in resorting to such statistical gymnastics, nothing is changed. Phychologically, the effect is uplifting.

The causes for the spread between actual production and theoretical maximum installed machine capacity are many and varied. Too often they are overlooked entirely.

Take, for example, the case of news print. In recent years the newspaper publishers have been seized with waves of economy. One move was to reduce the width of the margins. The size of the printed page remained the same, but the white space on the edges was narrowed down. The news print manufacturer took the loss. He had to reduce the size of his rolls. But, as his machine had been designed to produce the greater width, he had no choice but to increase the trim on the machine and absorb a tonnage loss. Here was a practical example of tonnage being reduced, with no opportunity to take up the slack. The extra trim was useless. Yet, the theoretical capacity of the machine remained the same. The net result was to increase the apparent ratio of idleness.

In other cases, paper mills have installed high speed, wide machines, but have failed thru one cause or another to achieve in actual performance what the machine had been designed for. Here would be a case

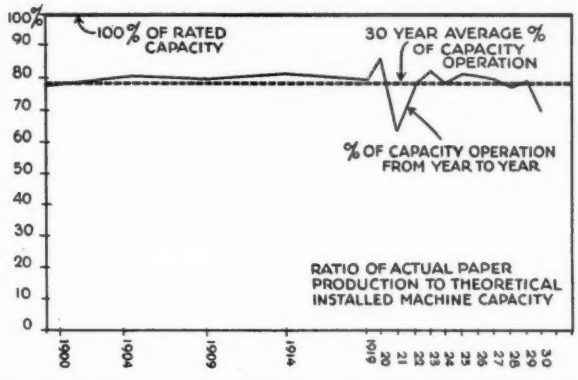
where the mill management was pounding the machine on the back for all they were worth, without being able to show a production sheet that was satisfactory. Here, too, was more idle tonnage.

Or, again, it often happens that orders do not lend themselves to the most efficient machine programs. There is unavoidable loss in running a narrower sheet than necessary. There are losses in changing grades on small lots. More particularly is this latter apt to be true in these days when jobbers carry their stocks in the mill, order hand to mouth, and want things with a double rush when they do get an order. The mill has to chalk up these losses in tonnage, but there is no justice in charging such idle hours to overproduction in the industry.

Perhaps the most unwarranted charges to idle tonnage occur with those mills with one or more obsolete machines. Obsolescence may arise from two principal causes. The machine may be just plain old. The market for the grades of paper it could produce may have disappeared. Physical obsolescence or economic obsolescence, the cause is no matter, the charge to idle machine capacity is the same.

Take the specific case of a mill which operated several machines. One of the units was a hoary ancient. It had been a moneymaker in its day, but the market in the mill's logical distribution territory had changed and this old machine had simply fallen by the wayside purely because of its inability to compete. Better machines, newer machines, were producing better papers. The day that machine was stopped it should have been struck off the totals of idle capacity. It wasn't idle. It was just plain dead. Yet the machine continued to be reported as idle capacity for several years.

Some one not long ago made the statement that every paper machine ever built, except those totally destroyed in some catastrophe such as fire or earthquake—and even some of those are not entirely out—was still in operation, or ready to be operated if orders could be found for it. In other words, a paper machine is never retired. It outlives its depreciation and eventually

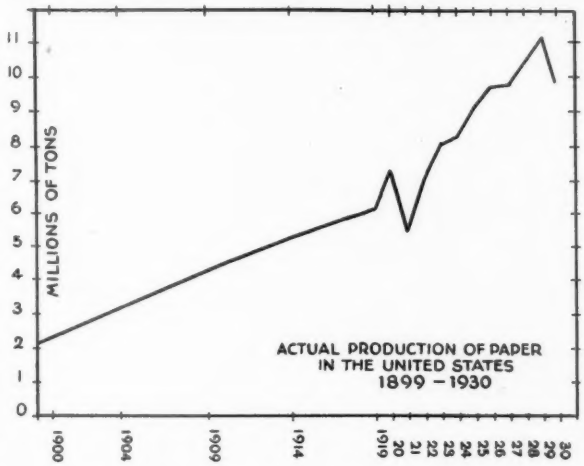


Here the actual production of paper in the United States year by year has been plotted against the installed machine capacity. The stability of the industry is evident in the narrow range within which the production curve fluctuates.

stands on the mill's books as so much velvet. But no matter. It runs on and on. Eventually it passes out of the first class mill to a second class mill at junk prices, but not as junk. It reappears as cheap producing tonnage to compete again.

Paper making machinery is constantly being improved. Markets are changing. Kraft papers, for example, have come up tremendously in recent years, finding new uses to some degree, but plainly cutting into the long established market for sulphite wrapping papers in a much larger sense. What about the sulphite wrapping paper machines that have lost their step in the economic march? Are they to be classed as temporarily idle tonnage, or are they to be permanently shuffled into the limbo of the past, erased once and for all from the statistical totals of idle tonnage?

Many grades of paper that were made on a cylinder machine yesterday are being produced in better qual-



The total production of paper has gone steadily upward in the United States. The rate of increase has been more rapid in the post-war years, an acceleration which reflects the adjustments which have been necessary within the industry.

ity and at a cheaper cost on a fourdrinier machine today. Many grades of paper that were staple items yesterday have disappeared from the market entirely today. Change has always characterized competitive industry, but never has the pace with which changes have been made been faster than in the present time.

Perhaps the greatest single contribution to reported idle tonnage is the reluctance of paper manufacturers to write an old machine permanently into oblivion when it has fulfilled the expectations of its depreciation account and become genuinely obsolescent. The physical life of a paper machine is long, that is, the physical life as so much metal. Its actual economic life, however, is much shorter than is willing to be conceded. Like the passing of the noble fire horse upon the invasion of motorized equipment, so is the occasion of the passing of an old paper machine cause for bringing forth a pathetic tear in the eye of the paper manufacturer it has served so long and well. It takes a strong gulp and a resolute mind to put aside the thot of the size of that invoice which came with the machine so many years ago, to overlook the fact that the machine still turns over just like new. It takes firm resolution to dismiss the potential values of that old machine and turn away a last possible profit in selling as second hand instead of junk metal—and only as so much scrap metal should an old machine ever be permitted to leave a mill.

Perhaps there is no sale. The old machine hides away in some unused corner of the mill, gathering dust and cobwebs. It continues to be listed as idle capacity. The number of such corpses carried in total by the industry is unknown, but they are many. Their presence with the living creates a shroud of gloom. They ought to be declared officially dead, taken out, and given a decent burial.

Then "overproduction" could get back to normal.

Sawyer Represents Foxboro for TAPPI

The Foxboro Company, makers of recording and control instruments, has designated B. W. Sawyer as a representative of their company in TAPPI. Mr. Sawyer is the Northwest manager of the Foxboro Company, covering the Northwestern States and Alaska from his Portland headquarters.

Mr. Sawyer, who is an experienced mechanical engineer, has an unusual store of knowledge in his contact with a number of industries requiring the application of recording and control instruments.

In recent years The Foxboro Company has been devoting an unusual amount of attention to applications in the pulp and paper industry and Mr. Sawyer has played an unusual part due to his close association with the rapid growth of the pulp and paper industry in the Northwest. He intends to take an active part in the Pacific Section of TAPPI.

Japanese Paper Maker Visitors

Two Japanese paper makers were in the Pacific Northwest the week of September 7 visiting pulp and paper mills. They are Risaku Ohkawa and Yoichi Awoyama of the Fuji Paper Company, Tokio, which operates eleven paper mills in Japan, employing 56 paper machines. They were accompanied by C. E. Kinne, vice-president of Bagley & Sewall, Watertown, N. Y., and C. R. Whipple, sales engineer of Beloit Iron Works, Beloit, Wisconsin, who have installed a considerable quantity of machinery in Northwest mills.

The party visited the mills at Camas, Oregon City, West Linn and St. Helens and then left for the East, expecting to return to Japan in about 60 days.

Messrs. Ohkawa and Awoyama said that the paper manufacturers of Japan by agreeemnt were keeping paper production down 25%. The curtailment was approved by the government, they said. They were able to take care of the market, they said, and at the same time were able to produce quantities of needed pulp from native woods.

Heuer Now With Weyerhaeuser At Longview

It's a long drive from Newton Falls, N. Y., to Longview, Washington, virtually from Coast to Coast. But H. Robert Heuer now has that drive behind him as a memory of 1931.

Following his recent resignation from the Newton Falls Paper Company in the New York City, Mr. Heuer drove to Longview and is now associated with the Pulp Division of the Weyerhaeuser Timber Company as assistant to Ben Larrabee, general mill superintendent.

Beyerl On Eastern Trip

C. F. Beyerl, superintendent of the Spaulding Pulp & Paper Company, Newberg, Oregon, was scheduled to leave early in October for a visit of several weeks among the paper mills of Minnesota, Wisconsin and Michigan. During his absence the mill was to be shut down for a week for boiler repairs.

Mr. Beyerl expected to consult with Spaulding customers and prospective customers during his trip and if his tour is successful it is understood that the third drying machine at the Newberg plant is to be put in operation. This machine was installed at the plant last winter, but has never been in production.

J. B. Wilt, formerly with the Stebbins Engineering & Manufacturing Company, has gone to Newberg to handle the plant during Mr. Beyerl's absence.

* * *

Nils Terens, of the St. Regis Paper Company, was in Portland for a visit of several days during September.

Grays Harbor Has Lots of Timber

The popular idea that the supply of pulpwood is unlimited in the Pacific Northwest was scouted by W. A. Mumaw, extension manager of the Grays Harbor Railway & Light Company of Aberdeen, Washington, in an address to the Aberdeen Chamber of Commerce in which he took up the question of pulp and paper possibilities in Washington and Oregon.

"Only by careful reforestation and advised utilization have we a supply adequate to the present rate of consumption in those districts other than Grays Harbor which are available to pulp wood users," said Mr. Mumaw. "Both the Columbia River and Puget Sound districts already have more nearly reached the saturation point in numbers of mills which the pulpwood supply of those districts will support.

"Eastern pulp companies, seeing the end of their present sources of supply very near at hand, and realizing the limited supply that exists in the Northwest, are casting anxious glances in this direction. This means that the pulp and paper development of every district in the States of Oregon and Washington that has such potentialities, is assured. No pulp and paper company, surveying the situation in the Northwest with care, is going to locate in a territory, the sustained yield of which is endangered by overdrafts on its timber sources. The next companies that move westward are going to look for districts which have a supply of pulp timber ample, and more than ample, for the all-time needs of their mills. That is where Grays Harbor will come in."

Mr. Mumaw believes that the westward movement of the remaining eastern pulp and paper manufacturers is beginning now. He cites as his reasons that inquiries regarding the potentialities of the Northwest along this line are more frequent and more insistent than ever before. There is no doubt, he states, that eastern firms are close to the end of their available supplies of raw materials and that they must either come West or go out of business. He does not believe that they will resort to the latter alternative.

Olympic Forest Mill Adds Warehouse

The contract for the design and construction of a pulp storage building has been awarded The Austin Company, engineers and builders of Cleveland, by the Olympic Forest Products Company. The structure will be one-story, 66 feet wide and 240 feet long, and will be erected at Port Angeles, Washington. The project represents an investment of $25,000. When completed, it will provide additional storage area sufficient to eliminate forced shut-downs in plant operation. The Seattle office of The Austin Company is in charge of the work.

Rainier Pulp Adds Warehouse

The contract for the design and construction of a warehouse has been awarded The Austin Company, engineers and builders of Cleveland, by the Rainier Pulp & Paper Company. The structure will be erected at the company's mills in Shelton, Washington. It will be a one-story building, 70 feet wide and 160 feet long. The project represents an investment of $25,000.

Sidney Plant Enlarging

The Sidney Roofing & Paper Company is planning to build an addition to its plant at Victoria, B. C. The new construction will be to provide warehouse and manufacturing space approximately 40 by 80 feet. Brick and hollow tile is to be used.

The company also has a branch in Vancouver.

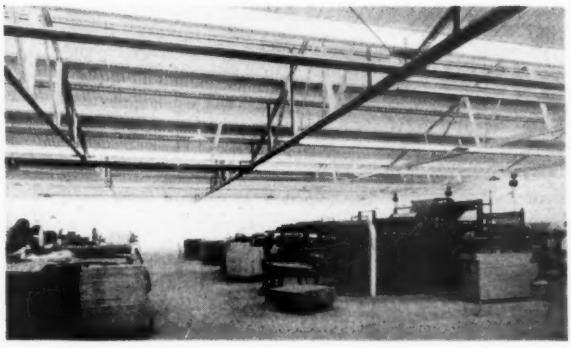
Crown Willamette's
NEW CONVERTING PLANT
to serve California's fruit industry

AS American agriculture, the backbone of our national life, grows, so do the industries that provide its supplies, hence the growth of the Crown-Willamette Paper Company's fruit wrap plant in Los Angeles, which manufactures tissue wraps for citrus, and decidous fruits, melons, and vegetables.

The latest step in the growth of the Los Angeles branch of the paper firm is the recent acquisition of a splendid new plant at 2945 East Twelfth street. The building is 195 by 315 feet long, of one story, concrete foundation, brick walls, steel trussed roof, construction. The spacious offices are situated on a second floor at the outer corner of the building.

Below the office is the finished storage room. This is 195 by 110 feet wide, and it is here that the packed fruit wraps are kept. In order that there shall be no deterioration whatsoever, the air in this room is carefully controlled as to temperature and humidity by a Mohlaire heat and temperature regulator. Off the finished storage room is the shipping room, where trucks can back up to load the finished products.

In this room also is storage space for miscellaneous stocks of wrapping paper, bags, towels, toilet paper, and other paper products of the company. No print paper is stored here however. A spur track runs full length of the building, making unloading of material easy.



The working spaces in Crown Willamette Paper Company's new converting plant at Los Angeles have been laid out to provide plenty of room. Shown here is a view of the printing department.

Adjacent is the operating room, 95 by 195 feet. It is here the battery of six presses print the wrappers, where they are cut and bundled. The company has done away entirely with the old system of overhead drive on the machinery. Each machine is direct connected. Overhead trolleys are installed for lifting the heavy rolls of paper.

On the two bundling machines and on the cutting machine compressed air has been utilized to facilitate these operations.

Just off the press room is the stereotyping room, where the plates are made for printing designs. Not only is this room light and airy, in contrast to the dingy hole one often sees in printing plants, but it is extremely well equipped with the latest type machinery.

On the other side of the press room is the Jumbo

The building has been constructed on lines combining utility and beauty, thus supporting the growing conviction that art and business need not be strangers.

roll storage; a room the same size as the finished goods storage, 195 by 110 feet. This room is also under temperature and humidity control. The unfinished stocks of wrapping tissue are kept here in perfect condition until the time when they will be needed. The capacity of this room is about 1,500 tons.

The main product of the new plant, is of course, citrus wraps, since more than 75,000 carloads of citrus fruits are shipped from Southern California and Arizona each year, in addition to large quantities of tomatoes, melons, and deciduous fruits. The plant is also used as a "stand by" unit for the mills of the company in the north. That is, when the apple season is over in the Northwest, the Los Angeles plant is called into play on any other orders that the mills are too busy to take care of in their own production routine.

The Los Angeles branch of the Crown Willamette Paper Company was originally founded about 1902 as the Floriston Pulp & Paper Company, then in 1906 it was taken over by the Crown-Columbia Paper Company, then in 1914 it became the Crown Willamette Paper Company. From its original location on Second street near Central, the plant was moved to North Spring street where it was located for 19 years, moving last month to its present fine, new plant.

William R. McHaffie, resident manager, is a veteran in the Crown Willamette service, having been with the company for 39 years; for the past 15 years being sta-

tioned at Los Angeles. Mr. McHaffie started with the organization in San Francisco, then worked through every branch of the company, including the mills in the Northwest.

"The new plant," said Mr. McHaffie, "in its greatly improved state, will enable us to supply to a much better degree any of the requirements for paper wraps for the fruit and vegetable packing trade of Southern California and Arizona as well as elsewhere when necessary. We have so arranged the storage of both Jumbo or unfinished roll stocks, as well as the finished wraps to preserve them in the best possible manner, as is shown by our installation of humidifiers."

L. J. Arms On Western States Tour

National Paper Products Company has recently launched several new brands of roll toilet tissue. Among them is "Avalon", a 1000-sheet roll of pure white soft tissue. The package is made particularly attractive with its transparent cellophane wrapper.

L. J. Arms, Western sales manager of National Paper Products Company, who has done a great deal of pioneering and educational work incidental to the introduction of bathroom tissues since 1912, is now on a five-week tour of the Western states in the sales interest of the lines he represents. His trip took him first through the Pacific Northwest. From there he headed east and will go as far as Denver and Salt Lake City.

Particular emphasis is put at this time on the pure white bleached grades, both towels and toilet papers.

Mr. Arms reports satisfactory business but states that the price structure has been much disturbed in the past two years.

Following the extensive remodeling and improvement program of the Crown Willamette Paper Company's mill at Camas, Washington, several new bathroom tissues grades were developed, particular attention being paid to absorbency and soft texture. A large new converting plant was erected and manufacture of these grades for National Paper Products Company was concentrated at Camas. In these grades were developed ideas originated by Mr. Arms, who is considered an authority due to his long experience.

Intensive sales effort features the National company's activities at present, with a number of innovations being tried to establish primary and follow-up consumer contacts.

The National Paper Products Company is a division of Crown Zellerbach Corporation.

Ask Expansion at Salem Paper Mill

The board of directors of the Salem Building Congress has voted to petition the city council to urge the Oregon Pulp & Paper Company to proceed with the construction of a new building, for which the paper mill company obtained the vacation of a part of Trade street earlier in the year.

The building congress maintained that construction should be started now to relieve unemployment and that the company should keep the promise made when it secured the street vacation, to start construction on the vacated area within six months.

E. C. Bogren, manager of the Western Waxed Paper Company, Portland, and Theodore Rothchild of F. C. Stettler Manufacturing Company, paper box makers, have been appointed sub-committee chairmen of a Portland committee of 100, which has as its aim the establishment of a six-hour day or its equivalent.

Aging Qualities of Paper Towels

In study at the Bureau of Standards of the aging qualities of paper towels, the chief deteriorative effect found by tests of stored towels was loss of absorptiveness. While the deterioration was confined to a relatively small number of products, in a few cases it was of considerable magnitude. Study of an accelerated aging test made by heating the towels showed that their retention of absorptive quality during storage could be predicted quite accurately by this means.

This investigation was undertaken at the request of a government department which found that some towels had unsatisfactory absorptiveness after a few months' storage, despite their compliance, on delivery, with the specification suggested in Bureau of Standards Circular No. 294. The study of the problem was made in cooperation with paper towel manufacturers who furnished the towels used for the experimental tests and assisted materially with information and advice.

Thirty samples, thoroughly representative of the current commercial products and newly manufactured, were tested when received and retested at the end of each month for a period of six months. The changes in the properties of the towels under normal storage conditions were then compared with those which occurred when the towels were baked for varying periods of time at 100° C. The strength of the towels, as measured by the tensile breaking test, remained quite constant during storage. The towels that best retained their absorptiveness had low rosin content, low acidity, and long, clean fibers. There was no constant relation between loss of absorptiveness and species of fiber or the degree of its purification. The effects of six-months' storage, which appears to be a sufficient period for occurrence of any serious deterioration, were satisfactorily duplicated by baking the towels for one hour at 100° C.

A comparison of these recent tests with those made in 1925 shows there has been a decided trend toward increased weight, decreased size, and better absorptive quality.

New Zealanders Study North American Pulp Mills

In addition to some 12,500,000 acres of native forest the government and private enterprise has planted some half million acres of forests in New Zealand. The planting has been going on for a score or more of years and now, with trees reaching maturity, additional outlets are being sought for forest products.

To study the lumber and wood pulp industries of North America the Timberlands Woodpulp Ltd. sent Prof. H. Hugh Corbin and Ralph P. Worley to this continent to study forest conditions, logging methods, lumber mills and pulp-paper mills. Arriving in San Francisco on September 25 the two New Zealanders made their way north, visiting camps and mills at West Linn, Camas, Cathlamet, Longview, Tacoma, Everett, Powell River and other centers.

Their itinerary carried them thru Canada from Vancouver, B. C., to Montreal, Ottawa, New York, Chicago, Madison, and other cities where contacts to their interest could be made.

The fundamental purpose of the visitors is to make a comprehensive survey of the timber industries here, seeking ways and means for converting the New Zealand timber into products of commercial value. Their general plans include the construction of a pulp mill, type undecided, and possibly later, paper. New Zealand, a prosperous young land of 1,500,000 people, is today largely agricultural and has no pulp and paper mills.

Westminster Plant Pays 4% Dividend

Westminster Paper Company Ltd., of New Westminster, B. C., reports net profit for the year ended July 31, 1931, at $21,335.94. This is regarded as a creditable showing in view of general conditions and in consideration of the fact that it represents the first year of operation after being closed down for 12 months following destruction of the plant by fire. The balance sheet shows current assets at $167,128.88 (including $85,543.31 in inventories) compared with current liabilities of $98,937.49.

The directors announce declaration of a 4% stock dividend for immediate distribution, fractional shares to be adjusted by payment of cash on a 4% basis. Payment of a dividend in stock was decided upon to avoid delaying some return to shareholders while at the same time conserving the company's cash position. Practically all of the common stock is held in British Columbia.

Improvement in earnings during the current year is anticipated as the period of adjustment following the inauguration of the new plant has been successfully passed. An encouraging response has been received from British Columbia consumers to an appeal to patronize paper specialties of British Columbia manufacture while valuable connections were established during the past year in the export market by a personal visit of the president, J. J. Herb, to New Zealand, Australia and the Orient.

In his report to shareholders at the annual meeting, Mr. Herb stated:

"The past year has been rather difficult due to the fact that our plant was out of operation for one year. Getting business back during these depressed times has required a great deal of effort and expense. However, we have succeeded in establishing ourselves once again in the market and by keeping in constant touch with our customers we have been able to run to capacity at all times.

"Prices on our finished products are lower than they have been for years, but we have practiced rigid economy in the operation of our plant and by obtaining reduced costs on our raw materials we are able to operate at a profit. We feel that if prices and business conditions remain as they are at the present time, the coming year will prove much more satisfactory than the past."

Officers and directors of the company are as follows: A. W. Gray, mayor of New Westminster, vice-president; F. Smith, F. Wright, C. S. Henley (representing the Royal Financial Corporation Ltd., who underwrite the bond issue), J. G. Robson, Ald. John Peck, H. M. Lord, secretary.

B. C. Goes In For Handy Apple Carton

A new market for paper boxes and cardboard cartons has developed in the British Columbia apple growing district.

The Kelowna Fruit Company, a grower-owned and controlled shipping organization, is now experimenting with apples in a five-pound carton. Early in the season the Kelowna company conceived the idea of using a popular-sized container for apples.

The average city buyer, experience has shown, will not purchase a whole box of apples (forty pounds) at a time. The initial outlay is not in keeping with his other purchases of foodstuffs. Five-pound packets of apples, on the other hand, can be retailed for twenty-five cents, a popular price.

The packet has met quick popularity and the company has been compelled to turn down orders as it was not in a position to meet the sudden demand for the handy containers. Next season, it is expected, the cardboard box will be used extensively not only at Kelowna but throughout the apple country.

Hint of Montana Paper Mill

Montana may have its first paper mill some time in the not distant future. Montana business men, interested in the establishment of such a mill, got together during the week of September 15 and called B. T. McBain, pulp and paper consultant of Portland, Oregon, to visit and advise with them.

When Mr. McBain returned to Portland he admitted he had been up to Montana at the request of business men from several cities of that state, who had been called together for the purpose of considering the matter. Mr. McBain, however, declined to state where the proposed mill would be built or who was behind the project. When the development had reached a point where his client was satisfied publicity would not injure or retard it, he would be pleased to give the details for publication, he said.

A Testimonial For West Coast Pulp

Evidence continues to pile up that the better produce of Pacific Coast pulp mills is steadily winning a place in the sun, and, more specifically, in the hearts of Eastern paper makers.

For example, somewhat over a year ago the Olympic Forest Products Company completed its five-digester bleached sulphite pulp mill at Port Angeles, Washington. Pulp began to flow back to market in the Midwest and Atlantic States. Today the Olympic mill is running at full capacity.

One of the principal customers of the Olympic mill is the S. D. Warren Company of Cumberland, Maine. They are among the oldest and best known paper makers in the country. Into their papers began to go more and more of the Olympic bleached sulphite, a new pulp from a new region being assimilated in the manufacture of an old established line of papers. Pulp from the Pacific Coast going around to the Atlantic Coast to supplement dwindling native supplies there.

One September day an unexpected tribute to Pacific Coast pulp in general and to Olympic pulp in particular came into the office of President E. M. Mills of the Olympic Forest Products Company from C. B. Morgan, executive vice-president of the S. D. Warren Company. The letter speaks for itself. It follows:

S. D. WARREN CO.
Boston, Mass.,
September 10, 1931.

Mr. Edward M. Mills,
343 Sansome Street,
San Francisco, California.

Dear Mr. Mills:—

Have you taken time to examine the new dull and glossy coated grades which we recently put on the market? If you have, you can understand why we are enthusiastic about Olympic pulp. Our Research Department says that the unusual flexibility, strength, and printing qualities in these grades are due in no small degree to certain qualities in the Olympic pulp.

We took the liberty of attaching the name "Olympic" to one of our new grades, explaining to our distributors that this was a little tribute to the finest pulp we had ever been able to get at Cumberland Mills. Tell the boys at the mill for us.

With best regards, I remain,

Yours very truly,
S. D. WARREN COMPANY.
C. B. Morgan,
Executive Vice Pres.

CBM/LOD

T-R-A-D-E - T-A-L-K

Devoted to the Paper Trade of the Western States

1931 OFFICERS
PACIFIC STATES PAPER TRADE ASSOCIATION

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George I. Tompkins, Sierra Paper Co., Los Angeles.

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F. E. Jeffries, Tacoma Paper & Stationery Co., Tacoma.
A. W. Towne, Blake, Moffitt & Towne, San Francisco.

Secretary-Treasurer
H. Arthur Dunn, San Francisco.

National Paper Trade Cancels Fall Meeting

Altho fully realizing the advantages of mutual support and interchange of views and information at a time like the present, the board of directors of the National Paper Trade Association after due consideration decided to cancel the scheduled Fall meeting which was to have been held at Chicago.

In a partial canvass of the membership, particularly among the more remotely removed, it was revealed that pressing problems of the trade were keeping the great majority of executives close to their desks. Rather than to carry thru a meeting which would involve the expenditure of time and money of attendants upon a gathering which would not be entirely representative, it was decided to cancel the October meeting for 1931 only.

President Arthur W. Blackman of the national association states that he expects the omission of the Fall meeting will lead to a more complete representation at New York in February "When it is hoped that conditions will be more favorable and much more can be accomplished."

May Produce Tex-Tone Paper On Coast

It has been rumored around Portland that two Pacific Northwest paper mills are considering the installation of equipment in their plants for the production of Tex-Tone paper for wrapping. The process developed by the Tex-Tone Paper Products Company, New York, photographs designs and the customer's identification on kraft paper by the use of only about one pound of chemicals to 500 pounds of paper.

This operation is performed by the use of rolls on which the design is drawn and these rolls are so constructed that inserts bearing the customer's identification mark, name or any other matter, can be made at frequent intervals, so that such mark will appear often on the paper produced. These insert plates can be prepared at a relatively small cost, so that it is feasible to make up an order as small as 500 pounds. The great advantages of the process are low cost and adaptability.

It is understood that the patentees are making a survey of the Pacific Coast and its markets to see if the prospective business warrants granting production rights to one or more Western mills.

Tex-Tone is being introduced on the Coast by G. E. Dalton Company of Los Angeles, and is being handled by the various jobbing houses.

J. L. Murray to Make Long Trip

J. L. Murray, director of sales promotion for the 75-ton book paper mill of the Everett Pulp & Paper Company at Everett, Washington, is planning to leave soon for an extended business trip. He will first go to California in which region a considerable tonnage of Everett papers are distributed. There he will take up matters of contact with jobber-customers and printer users of Everett papers.

Following the California contacts Mr. Murray will go East for several weeks, one of his objects being to attend a convention of stationers.

Mr. Murray spent some time in the East earlier in the year.

The Everett Pulp & Paper Company, under the direction of Mr. Murray's department, has brought out a new broadside stressing the printing qualities of Everett papers. The broadside is educational for printer and user of paper alike in that it depicts the printing qualities of good, poor and indifferent halftones and electros made from photographs of differing quality.

Mielke Heads Community Chest Committee

Otto W. Mielke, Northwest president of Blake- Moffitt & Towne, and in charge of the Portland division of that Coast-wide paper distributing organization, has been named chairman of the central committee on preliminary organization for the annual Community Chest drive. The central committee has been assigned the task of raising about 60% of the entire sum.

Robert H. Scanlon In California

After several years of active service at Powell River as assistant resident manager of the Powell River Company's big news print mill in British Columbia, Robert H. Scanlon has been transferred to the distribution end of the business. He is now in California on an extended trip making contact with the trade.

Pioneer Paper Merchant Passes

E. W. Leehman, affectionately known as the "dean of the paper industry in Colorado," died on September 22 in a Denver hospital. He had been identified with the industry for over a half century, having reached Denver in the Seventies to take over the management of the old Peters Paper Company.

"Nick" La Guardia, city sales manager for the Denver Branch of the Graham Paper Company, always manages his vacations when they can allow him to sit on some major sport event. This year he was in St. Louis for the World Series games and then went on to South Bend to watch Notre Dame do a pigskin argument with Indiana.

Slitting Special Papers—Attention of Specialists

A fact generally realized among paper makers is that special papers require expert attention in the beating and digesting processes and even on the wire.

A fact not so well known, but nevertheless true, pointed out by executives of the Cameron Machine Company, is that the slitting and winding of different grades of paper represent separate and distinct problems. This is especially true if after the paper making process the paper has been embossed or coated in any manner.

A case in point is the Waterfalls Paper Company, who were confronted with the problem of slitting and winding 21½" diameter rolls of highly embossed paper into rolls 12" wide across the full width of the machine which in this case was 62" wide. They first tried a machine which was perfectly satisfactory on ordinary grades of paper, but in winding the embossed stock much difficulty was experienced with telescoped rolls.

Finally a machine was purchased from the Cameron Machine Company, slitting and roll-winding specialists. The machine proved entirely satisfactory, so much so that there are two machines of this type now in operation at the mills of the Waterfalls Paper Company. This emphasizes the point, Cameron suggests, that it pays to leave specialized work to specialists.

Are Western Papers Better?

That newsprints from the Pacific Coast have better keeping qualities than newsprints from east of Chicago has been indicated by scientific examination of 101 Eastern and 116 Pacific Coast samples of newspapers published between 1865 and 1895.

The examination was made by the National Research Council at the request of the American Library Association, assisted by a grant from the Carnegie Foundation, to ascertain the effect of storage conditions on printed records. The work was performed at the U. S. Bureau of Standards.

Dr. J. F. G. Hicks, now of Portland, Ore., who participated in the research, has prepared a paper summarizing certain of the results. It has now been released for publication in the Library Journal or Library Quarterly, and in advance of such publication he kindly loaned a copy of the manuscript to PACIFIC PULP & PAPER INDUSTRY for examination and use.

Some 800 books, periodicals and newspapers were examined by the researchers but only the newspapers are separated into geographical classifications in Dr. Hicks' thesis.

For the purpose of rating the comparative states of preservation of the various newspapers, five arbitrary color numbers and five arbitrary strength numbers were selected. No. 1 color meant "the least discolored" and No. 5 "the most discolored", Nos. 2, 3 and 4 being intermediate. No. 1 strength meant "strongest" and No. 5 meant "weakest". All samples were classified accordingly.

Summarized, the results of the examinations gave the 101 Eastern newspapers an average color number of 2.8, and the 116 Pacific Coast newspapers an average color number of 2.2, indication slightly less discoleration for the Pacific Coast newsprint. They gave the Eastern newspapers, as a whole, an average strength number of 3 and the Pacific Coast newspapers an average strength number of 1., indicating that the Pacific Coast newspapers were just twice as strong as the Eastern newsprints.

Paper fibers in all the samples were examined microscopically. It is interesting to note the changes in composition of the newsprint that came with the years. Of the samples published in the East between 1865 and 1870 on an average 52% of the fibers were rag, 30% groundwood, 12% straw and 6% esparto. The Pacific Coast samples of the same period were 100% rag. The Eastern samples as an average for the next five-year period, 1870-1875, showed 5% chemical wood, 45% rag, 10% groundwood, 20% straw and 20% esparto. The Pacific Coast samples of this period showed 10% rag, 20% groundwood and 70% esparto. By 1890-1895 all rag fibres had disappeared from the Eastern newsprint, and only 5% was retained in the Pacific Coast papers. The Eastern papers were 25% chemical wood fibres and 75% groundwood, while the Pacific Coast papers contained 30% chemical wood and 65% groundwood.

Commenting on the comparison of the newsprints from the two sections, Dr. Hicks says, "One notices several interesting facts, for instance:

"1. Difference in the use of straw-fiber.

"2. Papers from both localities containing grass-fiber identifiable as esparto grass always retained a good color apparently independent of storage conditions.

"3. In general the newsprints from the Pacific Coast show a superior strength for the same age, although there is little difference in color change.

"4. While some of the newsprints from the Pacific Coast contained as much groundwood as the Eastern newsprints of the same date-intervals, they also show a higher degree of permanence."

Among the reasons advanced for making the distinction between the papers from the two localities was the fact that there were actual differences in composition of wood-fibers. "The Western Hemlock and Douglas Fir of the Pacific Coast", Dr. Hicks explains, "have distinctive properties of their own, which should, it was reasoned, be exhibited in the permanence of papers made from them."

That the investigators were justified in making the distinction for such a reason seems apparent from the results.

Summarizing the study of book, periodical and newsprint paper, Dr. Hicks comments that the following facts have been brought out:

"Purity of fiber and paper-permanency are very intimately related. This idea is the result of having observed the many papers of a relatively high degree of permanency have been made from inexpensive raw materials. There appear to be these internal causes of paper deterioration: internal acidity, crudeness of fiber, rosin sizing, and traces of iron compounds. . .

"For approximately the same age and length of storage, papers from the Pacific Coast appear to be in a somewhat better state of preservation than those stored on the Atlantic Coast. One way of explaining this state of affairs is to consider the difference in wood used to make paper, the climatic difference, and the difference in types of fuels, hence the difference in degree of air pollution, in the two localities. . .

"In so far as this investigation is concerned, it appears that one must look for the causes of paper-deterioration largely within the papers themselves."

Altho the Fall upturn in business in Denver has not as yet been all that was hoped for, a substantial increase has been apparent and prospects have been more sanguine than in months. Advance orders would indicate that the holiday trade will fall but little short of previous years. Crops thruout the state have been generally good. With the sugar beet crop anticipated to be the largest in history several millions of dollars will be released between now and the first of the year to the benefit of all industries.

Jaite Bag to Build Los Angeles Factory

The Jaite Company, manufacturers of paper bags, will increase their announced $125,000 investment in their new branch plant at Los Angeles to $500,000 soon. General contract bids for the building, to cost approximately $25,000 were opened October 10. Machinery for this first unit will cost approximately $100,000.

G. A. Bauman, California sales manager of the company and manager of the Wilmington branch factory, will award the building contract. The first unit will have a floor space of 20,000 square feet.

The site recently purchased by the company includes all of the city block lying east of McFarland avenue and north of the Southern Pacific tracks in the "Wilmington Fill" industrial district. The first unit will be a steel building 240 feet long.

Thirty persons will be employed at the outset with expansion plans calling for the increasing of this payroll to a total of seventy-five.

The unit will be known as the Jaite Company of California, and will be a subsidiary of the parent corporation located at Jaite, Ohio, near Cleveland.

The company manufactures multi-wall paper bags of large size, used as containers for cement, plaster, sugar and other heavy commodities.

The Jaite Company has another Pacific Coast branch at St. Helens, Oregon.

About the Idaho Pulp Mill

There is little to report on the Pacific States Pulp & Paper Company which a few weeks ago announced that it had completed financing arrangements looking toward the building of a 100-ton bleached kraft pulp mill at Priest River, Idaho.

Charles W. Beardmore, Priest River lumberman, has been in New York for several months and was said to be due back in Priest River about the first week of October. Meanwhile, little could be learned thru the Priest River offices of the company where L. E. Van Winkle is in charge.

The pulp mill is projected on a site adjacent to the idle lumber mill formerly operated by Mr. Beardmore. Industrial Associates, Inc., of New York, announced by Mr. Beardmore as having been retained to carry out construction, have advised that they expect to build the salt cake recovery plant which the Pacific States company plans to develop in the arid region of central Washington as a part of their project. No mention, however, is made of the pulp mill construction at this time.

The George B. Caldwell Co. of New York, awarded the financing contract, has advised that a prospectus was being prepared and that a public offering of the securities would be made. No late information is available at this writing regarding the advance of funds to the Pacific States Company.

Greater Activity In Grays Harbor Region

Down in the moist Coastal region of Southwestern Washington where they grow trees that are trees, the several communities that comprise the Grays Harbor district are witnessing some resumption of activity. Grays Harbor, it might be explained, has its economic roots almost entirely in the forest and makes its bread and butter in converting the trees into commercial products.

The Grays Harbor Pulp & Paper Company is running its 175-ton bleached sulphite pulp mill full blast, but the 50-ton paper mill unit is on a short week. Orders are reported in fair volume, but prices are off.

Lumber and logging wages are reported as very low, with some mills paying as little as $1.85 per day, but the average apparently at $2.50 bottom. Clemons Logging Company recently opened two camps and hired 250 men; M. R. Smith, one camp and 125 men. The Polsons are running two camps and Schafer Brothers have put another camp in with 50 men, this in addition to two camps already going. Northwestern indicates resumption in the repair of equipment. Two camps are being run by Saginaw in North River; Hobi has one operating in Indian timber and expects to open another. Donovan-Corkery is operating one camp.

In Aberdeen, the Hulbert; Anderson & Middleton; Schafer's No. 4; E. K. Bishop; Bay City; Wilson Brothers; and E. C. Miller Cedar mills are running. Some are operating spasmodically, but then again some are on two shifts.

Hoquiam fares less well with only Polson and Greenwood running. Unconfirmed rumors are affoat that Weyerhaeuser is seeking a foothold in Hoquiam.

Many small shingle mills, and some larger ones, are running in Grays Harbor territory. Aberdeen Plywood has opened again. Harbor Plywood has three out of four mills going.

Port Angeles Installs New Digester

The Olympic Forest Products Company has placed a contract with the Commercial Boiler Works of Seattle for the construction and installation of No. 6 digester for its Port Angeles, Washington, 175-ton bleached sulphite pulp mill. An additional blowpit will be installed. The new unit will be piped for Chemi-Pulp cooking, as are the other five.

It is explained by the company's executives that the addition of the new digester at this time is for the purpose of balancing the mill. The digester building will not be disturbed as the mill was originally designed to house six cooking vessels, altho only five were installed when the mill was put into production a little more than a year ago.

No new equipment is being added beyond the blowpit, as the mill in its other departments has sufficient capacity to handle the output of six digesters. Up to this time the digester department has been a slight bottleneck in the plant, as screening, bleaching, and drying capacity have been more than able to handle the five-digester output.

The Port Angeles mill has been running at exceptional capacity recently and has received some excellent comments on its pulp quality from Eastern paper mill customers.

B. C. News Mills On Five-Day Week

This is the month when the British Columbia newsprint companies are establishing their sales contracts for the year, and executives are working long hours to complete the job.

Although the market for newsprint has been indifferent most of the year, with low prices prevailing, the prospects for the coming year are surprisingly good in certain quarters, according to company officers. The general feeling appears to be that domestic demand will not be less than it has been in recent months, while some of the export markets have shown substantial improvement.

Both the big British Columbia newsprint mills, Powell River Company, with a capacity of 650 tons daily, and Pacific Mills (Crown Zellerbach), 256 tons, are operating at about 80% capacity, which is considerably higher than in eastern newsprint mills.

Both the B. C. mills are on a five-day basis, but this is regarded as a purely temporary measure.

Is the Cordwood Supply Permanent?

Is the small pulpwood cutter an emergency stopgap, or will he continue in competition with the big logger?

WHAT part will small timber play in the production of pulp in the future on the Pacific Coast? That is a question many pulp and paper makers have asked themselves and their neighbors over a period of years. It is a question that is receiving a great deal of attention now, both from a point of speculation, and that of practice. Clearly, the problem resolves itself into two major aspects, first, cordwood supplied by the small man from the "back forty," and, second, regular supply from lands cut over by loggers or as by-product of a big operation, cut along with the big trees. The ultimate test of whether either or both will be adopted permanently, of course, is the cost sheet.

Problems of the large and small cordwood operator plainly would overlap on many points, and it is not improbable that experimentation with the small supply will pave the way for adequate and businesslike handling of the larger supply.

Mills known to be wrestling with this problem from the technical angle or from that of aiding in solving the present unemployment situation are situated at Everett, Hoquiam, Port Angeles, Bellingham, Shelton, all in Washington, and Salem, Empire and Newberg, in Oregon.

Length of Haul

Setups of the mills, grade of product desired, and local labor situations vary widely, but the problem as presented at Everett may be taken as an example. Here the matter of obtaining a cordwood supply to supplement the product of the Puget Sound Pulp and Timber Company's sawmill was initiated primarily as a means of helping solve the local unemployment problem. The plant includes a cut-up sawmill designed to break up hemlock logs exclusively for pulp. Cordwood buying has not been going on long enough to prove itself materially more economical or costly than breaking down the logs when all things are considered.

Thirty-two trucks, individually owned, are now supplying the Everett mill, each truck carrying in an average of about four cords a day. The price runs around $5.75 a cord, and compares favorably with present wood costs in other pulp mill centers. The haul varies from eight to twenty miles, and the loads average one and one-half cords, although one operator frequently arrives with more than three cords. Loads are scaled on arrival at the mill. The wood, already barked, is unloaded from truck to conveyor at the outlet of the sawmill, and from there goes through chippers and digesters with the other wood. Wood arriving when the conveyor is not working is scaled, dumped onto push cars and left to await its turn.

The supply received in this manner is supplemented by rail deliveries, coming from about twenty miles away.

The cordwood buying gives employment to about 250 men who might otherwise be idle. It enables small farmers to get some money out of their activity in clearing their land, and it gives small log operators something to do. Second growth and old growth are logged indiscriminately. Hemlock alone is used. Rigid inspection is maintained on size and peeling.

Several questions have been raised, "Will this source be more than temporary?" The composite answers resolve themselves into this:

"Once the depression is past and unemployment is no longer the spectre it is, the cost sheet will give the answer.

"If a pulp mill has a sawmill for breaking up logs as a part of its equipment, and that sawmill operates efficiently, it would be folly to pay maintenance, depreciation and interest on it and keep it idle. Run it or sell it.

"Would cordwood costs be low enough to justify junking the sawmill?

"If cordwood is bought from small operators who might be wiped out by a single unfavorable turn of business, the sawmill would have to be maintained for the safety of the operation. If the sawmill is maintained, men who can run it must be retained, and upkeep must be paid.

"When depression is over and wages rise, can cordwood with its high proportion of hand labor be kept at a reasonable price and still assure the small operator of a profit that will keep him in business? Or will better returns attract him and his workmen back to the logging camps and leave the mill without a supply?

Some Questions

"When the sap stops running, and bark no longer peels readily, can the cordwood maker keep his labor costs down? Can he keep them down when winter soaks the woods and makes it impossible to run his truck around in his stumpland without corduroying?

"Are these small operators allowing for depreciation on their equipment and will they be at their rope's end when the equipment they own now breaks down?

"How about hogged fuel and other by-products of logs the company will have to buy if it goes in for cordwood exclusively?

"If these small fellows fail to show sufficient strength to continue to operate, can a larger concern or a combination of the little fellows effect sufficient economies by large-scale operation to assure profit and permanence?

"Would it be wise for the company to seek to develop its own supply by buying up small tracts the owners would gladly have cleared? Or is the knowledge acquired in handling cordwood going to be an important aid to solution of the problem of handling small timber as a by-product of large cutting operations?"

In any event, the present handling of the situation helps to solve a crucial economic problem, and it affords an opportunity to experiment freely with costs at a minimum.

New Types
New Models
New Machines

EQUIPMENT

Manufacturers of, and dealers in, equipment used by pulp and paper mills, board manufacturers, converting plants, paper merchants, or any other branch of the industry may make their announcements in this department.

New Dealers
New Branches
Appointments

Power Feed Chipper Proving Worth

Some months ago the Shaffer Box Company installed a new type power feed chipper in the wood preparation room of its pulp mill. The chipper, designed and built by the Hesse-Ersted Iron Works of Portland, had a number of salient features such as: greater capacity because the wood was fed thru at uniform speed and did not descend by gravity; uniform chips and much less sawdust; greater speed flexibility.

One such 64-inch chipper is now producing in two shifts of eight hours all the wood used by the Shaffer mill in turning out 60 tons of pulp daily.

A. D. "Dad" Wood, superintendent of the Shaffer mill, has commented on some of the advantages achieved in the use of the new chipper as follows:

"When chips are uniform in size and free from slivers they 'flow' readily from the bin to the digester. This saves labor and delay due to 'hanging up' of chips in the bin. It eliminates loss of time between cooks, due to filling delays. When digesters are filled in the same number of minutes, cook after cook, there is less variation in the amount of wood which goes into digester, another factor in uniformity.

"With uniform chips there is less trouble in getting good circulation in the digester and digesters will blow clean. Under-size chips and over-size chips rob the digesters of their share of chemicals and this loss is considerable. In these days, when the paper maker is demanding pulp of uniform strength, maximum bending quality and expects the pulp maker to supply him with pulp which will behave in a similar manner in the beater, cook after cook, chips of uniform size are a great factor in assisting the pulp maker to satisfy the paper maker.

"When slivers go thru digesters to blow-pits and to knotters and screens they are responsible for stained fibres in the pulp. The chipper has reduced the amount of knotter refuse and screenings."

New Southwark Bulletin Is Useful

The Southwark Foundry and Machine Co., Division of Baldwin-Southwark Corporation, Philadelphia, Pennsylvania, has issued another of its series of bulletins, designed to meet the needs of the engineer engaged in the design or use of mechanisms for producing loads by hydraulic means.

Some of the data, Southwark believes, has never appeared in print. A pipe table is unusual and the data on accumulators, pumps, intensifiers and shock valves is almost unique. The inclusion of four pages of cross section paper for the user's own notes is a noteworthy convenience.

These bulletins are available on request from Baldwin-Southwark Corporation, Philadelphia, Pennsylvania, by those interested.

Farrel-Birmingham Company of Ansonia, Connecticut, makers of chilled rolls and heavy machinery have recently published a bulletin on the subject of "Improved Finish on Calender Rolls", of particular interest to the paper industry.

Bingham Builds Big Pump Business

Portland points to one exceptionally bright spot among its industries in the Bingham Pump Company which recently added a third shift to effect equilibrium between production and orders.

"Our business is 100% above that of last year," President R. V. Bingham states. "Last year we had the temerity to build our new factory, for which some criticized our action as foolish, but our business has proved the move to be justified."

The Bingham Company is now working on a contract to supply the complete pumping equipment for the new sulphite mill which the Weyerhaeuser Timber Company is now completing at Longview, Washington.

Among other orders the Bingham Company points to pumps built for the Longview Fibre Company's kraft mill, the Rainier Pulp & Paper Company's rayon pulp mill, the City of Portland's water system, and for a plantation irrigation project in the Hawaiian Islands.

Pioneer Rubber Mills Offer New Catalog

Pioneer Rubber Mills have just issued its new Catalog No. 31 covering lines of belting, hose, packing, and mechanical rubber goods, manufactured by its Pittsburg, California, plant. The new catalog is of the loose leaf type splendidly printed and illustrated.

One of the features of the book that makes it particularly useful is the large amount of technical information which it contains. It is not merely a catalog or listing of the products manufactured by the Pioneer Rubber Mills, but very much of a text book on transmission, conveying, and elevating belting, hose and mechanical rubber goods. The catalog carries some useful information which is splendid for quick reference.

Foxboro Non-Recording Time Controller

The Foxboro Company of Foxboro, Mass., offers a new instrument for controlling temperature or pressure in relation to time. This instrument, known as the Non-Recording Time Controller, will maintain a predetermined cycle of operation in any process involving temperature or pressure. The Controller is designed for use on industrial processes in which the relation of time to temperature or pressure is important.

John Waldron Corporation—New Catalog

John Waldron Corporation, New Brunswick, N. J., makers of paper converting specialty machines, are offering to interested executives in the trade their new Catalog No. 108, describing their machines for embossin, printing and folding paper napkins, also machines for creping paper of different quality.

The Bristol Company, Waterbury, Connecticut, is offering a new line of air operated recording controllers, employing a "free vane" as the initiator of control, which is a new departure in air operated control.

A new Catalog No. 4001, fully illustrating and describing this instrument is ready for distribution.

Westinghouse Re-Organizes Sales Department

To effectively serve the electrical requirements of all industries the industrial sales department of the Westinghouse Electric and Manufacturing Company has been reorganized under the direction of O. F. Stroman, industrial sales manager. The reorganized department is composed of units grouped according to the main classification of industry.

Two assistant sales managers and 14 divisional managers have been appointed and the new organization also provides for the grouping of specialized engineers with every sales division.

Bernard Lester and C. B. Stainback have been appointed assistant sales managers. Mr. Lester, long an active participant in the application of electricity to industry will have general charge of directing from headquarters the development of business with industrial users of electrical equipment. Mr. Stainback will have charge of apparatus applying to these industrial groupings.

Under Mr. Lester there has been created five industry divisional classifications with the following in charge: G. E. Stoltz, manager, mining and metal working electrification division; G. D. Bowne, manager, general mill electrification division; J. W. Speer, manager, machinery electrification division; E. B. Bremer, manager, appliance electrification division; and E. F. Mead, manager, General Industrial Resale Division.

Ray Smythe Announces Several New Accounts

From his recently established offices at 301 Park Building, Portland, Ray Smythe has announced that he is now prepared to answer inquiries originating in the Pacific Northwest for equipment manufactured by a number of companies catering to the pulp and paper industry. Mr. Smythe has had a long experience in the field of iron and steel manufacturing and his intimate contact with the pulp and paper industry of the Pacific Coast makes him one of the best known equipment men in the region.

Mr. Smythe will act for the Glens Falls Machine Works, manufacturers of pulp and paper mill machinery; the Ruths Steam Storage Inc.: the Nortmann-Duffke Company, manufacturers of Allegheny metal drainer bottoms, etc.; the D. J. Murray Mfg. Company; the Vulcan Iron Works; and Economy Pumping Machinery Company, manufacturers of a wide line of pumping equipment.

In addition Mr. Smythe will represent the Atwood Morrill Company of Salem, Massachusetts, makers of special valves. The last named line will be represented only in the Portland territory.

New De Laval Publication

Single stage, double suction centrifugal pumps of the horizontally split casing design are described and illustrated in a leaflet recently published by the De Laval Steam Turbine Company, Trenton, N. J. This type of pump was introduced by that company in 1901, and has become accepted as the standard type of high grade centrifugal pump. It is characterized by relatively high speeds, high efficiencies and the ability to work against high heads per stage.

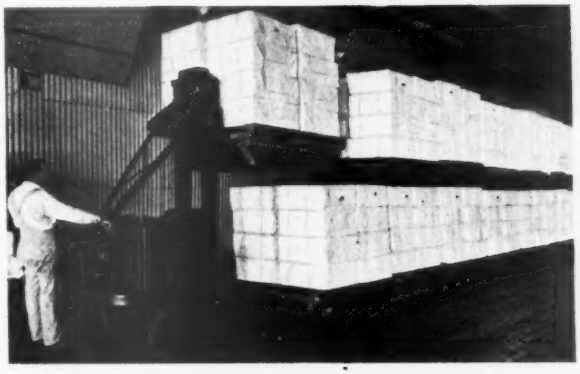
New Water Rate On Paper Products

The Luckenbach Steamship Company, Inc., has announced a change in Pacific Atlantic Coast domestic Eastbound minimum rate list No. 1. Effective September 24 the rate on paper bags, printing paper, etc., will be 40c in carload lots. The former rate was 50c on minimum loadings of 36,000 lbs.

New Type Elevator-Chisel Truck

Following the early application of a pair of forks to the front end of an electric lift truck platform, the demand has developed for ever-increasing capacity. Elwell-Parker has recently developed a 6,000-pound capacity machine for this purpose.

"This truck is built to accommodate either a battery or gas-electric unit for power purposes," it is explained by C. B. Cook, of the Elwell Parker Electric Company. "All operating safety features are retained in the gas-electric and the electric controller avoiding the use of either clutch or transmission, eliminating much wear and tear on the equipment with a consequent assurance of continuous operation.



Here is one of Elwell-Parker's latest tiering type trucks demonstrating its practical features in stacking sulphite pulp bales in the mill of the Puget Sound Pulp & Timber Company at Everett. The pulp remains on the skids until it reaches shipside.

"The truck is driven by motor through worm and gear. The drive wheels are the largest used on electric industrial trucks, 22" in diameter. The power plant is three point supported to accommodate it to uneven runways.

"The trail axle is likewise of the knuckle type and its 15"x7" wheels steer as do those on the drive axle, so that the truck may be maneuvered in congested quarters by means of the hand wheel steer. This axle is centrally pivoted so that the load forks in front of it are level, even though the wheels are not on level floors.

"The forks are made in various lengths and with varying spreads to accommodate many different classes of material, paper rolls, loaded skids, or can be fitted with crane boom to handle loads and to stack stock to great heights. After the forks are thrust under the load it may be tilted back 30 degrees in a sufficiently inclined position to carry safely to destination where load may be elevated five feet for tiering.

"When higher tiering is necessary, the uprights are made longer so that the fork carriage which travels in it may rise to greater heights. Where headroom is restricted as in cars or through doorways, and it is desired to tier loads to great heights later, telescoping uprights will be furnished.

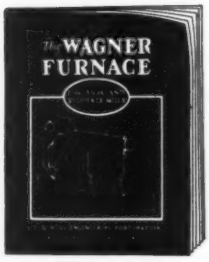
"The tilt and hoist features are accomplished by one unit. The lift is by cable while the positive tilt is by rack and pinion drive. Likewise the rack type provides for a positive forward tilt of uprights of several degrees. Automatic limit switches used throughout.

"This machine is the ninth of a series of fork trucks and in addition to having 6,000 pound capacity, retains all the flexibility of the 1,000-pound type.

The ROSS-WAGNER FURNACE

recovers chemicals and heat in processing of sulphate and soda pulp

In the soda process, the Ross-Wagner Furnace takes the place of the rotary and firepot, ash conveying apparatus and leachers. In the sulphate process it eliminates the need for disc evaporators, rotaries and smelters. It not only returns the chemicals for re-use in the most available form without requiring extra fuel but it also cuts down excessive waste of heat and labor and eliminates dirt, smoke and odors. The value of its combined advantages accounts for the fact that on nearly half a million tons of pulp per year, the chemical recovery is now being handled by these modern Ross-Wagner units.



Completely Described in This 24-PAGE BOOK

Profusely illustrated and containing data, and tables that clearly explain the economic advantages to be secured from operation of the Ross-Wagner System.

J. O. ROSS ENGINEERING CORPORATION

201 No. Wells Street, CHICAGO — Main Office—122 East 42nd Street, NEW YORK — 311 Lewis Building, PORTLAND, ORE.

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NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS
HEATING—VENTILATING—DRYING

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S·A·F·E·T·Y

FIRST — LAST — ALWAYS

The best safety device known is a careful man

Pacific Coast Division
Pulp and Paper Section

NATIONAL SAFETY COUNCIL

ROBERT H. SCANLON
Regional Director
Powell River Co., Ltd.
Powell River, B. C.

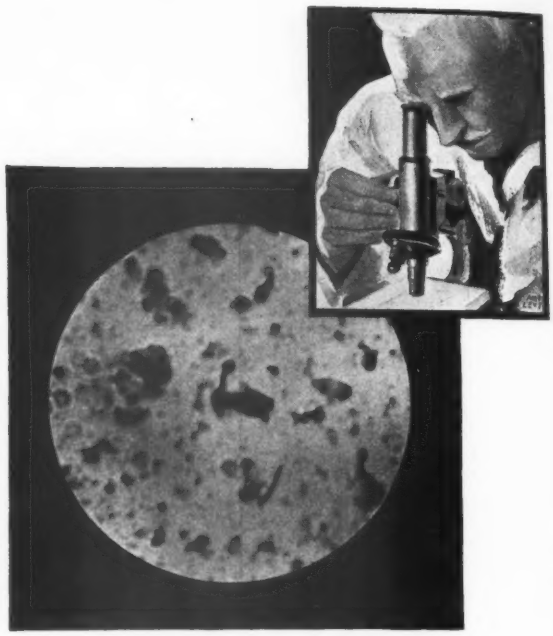
Times are tempting for reduction of the SAFETY effort, but the time for increased vigilance was never more appropriate.

STATEMENT OF ACCIDENT EXPERIENCE AUGUST, 1931

(Mills in State of Washington)

COMPANY—	Hours Worked	Total Accidents	Frequency Rate	Days Lost	Severity Rate	Standing
Fibreboard Products Inc., Sumner	35,368	0	0	0	0	1
Pacific Straw Paper & Board Co., Longview	17,374	0	0	0	0	2
Shaffer Box Co., Tacoma	14,336	0	0	0	0	3
Crown Willamette Paper Co., Camas	292,500	0	0	180	.615	4
Inland Empire Paper Co., Millwood	44,635	0	0	36	.806	5
Rainier Pulp & Paper Co., Shelton	63,458	1	15.8	19	.299	6
Puget Sound Pulp & Timber Co., Everett	58,300	1	17.2	11	.189	7
Grays Harbor Pulp & Paper Co., Hoquiam	55,056	1	18.1	14	.254	8
Fibreboard Products Inc., Port Angeles	27,736	1	36.0	5	.180	9
Everett Pulp & Paper Co., Everett	72,861	3	41.1	8	.110	10
Washington Pulp & Paper Corp., Port Angeles	59,597	3	50.3	7	.118	11
National Paper Products Co., Port Townsend	69,508	4	57.5	61	.878	12
Longview Fibre Co., Longview	100,472	6	59.7	55	.547	13
Puget Sound Pulp & Timber Co., Bellingham	27,576	2	72.5	50	1.813	14
Puget Sound Pulp & Timber Co., Anacortes	2,520	1	396.8	12	4.762	15

The following mills not reporting—Columbia River Paper Mills; Pacific Coast Paper Mills; Cascade Paper Co., not in operation; Tumwater Paper Mills, not in operation; St. Regis Kraft Co., not in operation.



How Chloramines Work in Slime Elimination

CHLORAMINES serve as a thorough, steady cleaner of both water and system, and are the best means yet developed to remove slime in pulp and paper mills and keep it from recurring.

The chloramines act very slowly, first attacking the soft surface slime, which is carried away in relatively small quantities and which can be handled easily by the felts and savealls without congestion. Then they penetrate the hard slime and scale underneath, eventually removing every vestige of the growth and accumulated dirt, and at the same time preventing the generation of more slime bacteria in the white water. The system is completely cleaned, the growth of any more organisms is prevented, and the entire operation goes on without any hazard to the paper itself. Chloramines act as a cleanser rather than as a purgative which might dump large quantities of slime onto the felts or into the savealls and endanger a whole run of paper.

The low oxidation potential of chloramines enables them to be effective for an unusually long time, and makes their application possible where chlorine alone would be immediately used up by oxidation. They have the further advantage of eliminating odors in cases where large dosage is necessary to take care of heavy bacterial loads, and where chlorine alone would leave disagreeable odors.

The Great Western engineers are prepared to give any cooperation desired for initial experiments and final installations for application of chloramines, and we shall be glad to answer inquiries with detailed information.

GREAT WESTERN ELECTRO-CHEMICAL CO.

9 Main Street, San Francisco, California
Plant: Pittsburg, California
Seattle Los Angeles

No Immediate Plans For Cascade Mill

Altho the Everett Pulp & Paper Company is continuing to study the set up of the Cascade Paper Company from both the standpoint of physical equipment and of possible marketing opportunities, it is taking advantage of the opportunity to deliberate which the present state of business affords.

The Cascade Paper Company, operating a 50-ton soda pulp book paper mill at West Tacoma, Washington, went into receivership about two years ago, and has been idle since then. It is a two machine mill. The Everett Pulp & Paper Company, operating a 75-ton, three machine, book paper mill at Everett, Washington, recently purchased the Cascade plant.

"There is nothing to say about the Cascade mill now," W. J. Pilz, manager of the Everett plant stated upon being questioned as to plans. "As you know, the paper market right now isn't at all favorable to bringing in new tonnage. We do not propose to rush into any plan without a thoro canvass of the situation. There is no hurry about it."

Pulp-Paper Car Loadings For Northwest Increase

In the report of the committee on Paper, Paper Products and Pulp, presented at the quarterly meeting of the Pacific Northwest Advisory Board of the American Railway Association, two bright rays flashed thru to indicate a breaking of the clouds and brighter weather ahead. The report was prepared by C. B. Richards of the Hawley Pulp & Paper Company and W. A. Brazeau of the Inland Empire Paper Company.

The report showed a prospective increase of 10.3% in car loadings for the fourth quarter of 1931 as compared to the same quarter of 1930. This increase was forecast despite an increasingly heavy movement by truck and water which seriously cuts into the rail total. Further, the report stated that quite an extensive improvement program was under way or being planned by several Pacific Northwest mills, indicating a return of confidence in the business structure. The text of the report follows:

There has been a gradual improvement in the conditions of the pulp and paper industry since our last committee report was read. The improvement has largely been due to increased sales to the Hawaiian Islands, to the Orient and to the North Atlantic territory.

The movement to transcontinental territory has held up well, considering competition, which the Coast mills have met from the mills in the Middle West section. The stocks formerly carried in warehouses are still very far below normal, indicating that the brokers are still buying in such quantities as will take care of immediate requirements. As far as the Pacific Coast is concerned, there has been a noticeable increase in sales, both for California and the Northwest.

The improved conditions do not, however, as far as the Pacific Coast is concerned, reflect a heavier car movement as the rail service is affected by a steady volume of paper moving in coastwise service between the Northwest and California ports and by increasing truck movement from the various mills to and from steamer connections and to the marketing sections thruout the Northwest.

An estimate of the amount of paper now being handled by truck and the effect that it has on car loadings is set at 4,000 tons for the month of July, or the equivalent of two hundred 20-ton cars.

The car requirements for the movement of pulp wood are also affected by truck service. The number of cars formerly used in moving this commodity from the more distant points has been greatly reduced by truck movement, and at the present time pulp wood is being handled by truck for distances up to 50 and 60 miles. The mills are using the truck and steamer service on account of the saving in revenue that follows, and as long as a saving can be made thru the use of those services, just so long will that method of transportation be used.

We would not venture the statement that the bottom of the depression has been reached as far as the paper industry is concerned; but regardless of the marketing conditions, there is quite an extensive improvement program under way or being planned by several Northwest mills, which indicates a firm belief that future conditions will at least reflect some improvement over the quarter just past.

Reports received from the various members of the committee indicate that there will be an increase of 10.3% in the number of cars required for the fourth quarter of 1931 over the actual loadings for the same period of 1930.

The actual and prospective loadings are as follows:

	Actual Loadings 1930	Prospective Loading 1931
October	753	830
November	710	783
December	565	623
Total	2028	2236

Thilmany Mills Make Changes

The Thilmany Pulp & Paper Company of Kaukauna, Wisconsin, recently announced the removal from its paper mill at Appleton, Wisconsin, of two Yankee machines. These machines are being moved to their pulp mill location in Kaukauna, Wisconsin. President M. A. Wertheimer expects to have them operating by January 1, 1932. The company has also purchased a 132" fourdrinier machine, together with such other equipment necessary in order to consume, along with the two Yankee machines, practically the entire tonnage of pulp manufactured at this pulp mill. The effect of this move will be to improve Thilmany's economic position by reason of concentrating at said pulp mill, but there will also be brought about a reduction in production at the present paper mill in Kaukauna, probably to the same extent as the increased production above named at pulp mill, it is planned by President Wertheimer.

"It is Thilmany's intention to manufacture as soon as possible on the new machine, fourdrinier grades of special character incorporating decorative designs in the paper through our marking roll process. Likewise as we are installing a new bleaching plant we shall soon be making upon this same machine, bleached kraft papers with and without design that will be new in the market," Mr. Wertheimer continued.

"The fact that we are making this expenditure at this time may be interesting news for the paper industry because it shows our faith in the future, and on this point permit us to say that if we all keep our heads level there is no reason why the future should not have reasonable returns in store for all those who make the proper effort to secure them."

The Thilmany Pulp & Paper Mills have an affiliation with the Longview Fibre Company of Longview, Washington thru an overlapping of executive personnel.

International Paper Company has acquired the Seminole Paper Company, distributors of toilet paper in Chicago. Seminole tissue, now made by International's mills, is to be intensively marketed with the help of an advertising campaign.

Get in on this money-making modernization movement—as CHAMPION has done

Timkenize to increase output and cut costs—consult the builder of your mills

A great modernization program is under way in the paper industry—a definite move to reduce paper manufacturing costs without lowering quality.

Forward-looking paper manufacturers have found that by taking the drag of friction out of their paper making machines, fourdriniers, calenders and other equipment, they can speed up production and cut down production costs at the same time.

They are doing this by replacing plain sleeve bearings with Timken Roller Bearings in super-calender rolls, machine calender rolls, press rolls, felt rolls, couch rolls, wire rolls and other friction-ridden points.

The Champion Coated Paper Company has increased super-calender output 35 to 40% through Timkens' capacity to accelerate operating speeds without causing excessive tearing of paper. Estimated power economies range from 40 to 50%.

The cost of changing your machines over from plain bearings to Timkens would be small considered in relation to the benefits received, as outlined above.

On top of that, you could expect the return of your investment in full in from 2 to 3 years.

Future profits must come largely from savings. Begin to save now with Timkens. Consult the builder of your machines. The Timken Roller Bearing Company, Canton, Ohio.

TIMKEN
Tapered
ROLLER BEARINGS

Japanese Paper Exports—South American Inquiries

A certain amount of sensation has been caused recently among paper manufacturers due to the firm purchase inquiries received from South American countries, Spain and other new markets for newsprint and high grade printing papers.

The inquiries for newsprint were received by the Oji Paper Manufacturing Company, the Fuji Paper Manufacturing Company and the Karafuto Industrial Company, while those for high grade printing papers were received by various paper manufacturers belonging to the Paper Manufacturers Association of Japan.

Minute consideration is being given by the manufacturers to the matter of prices and transportation cost, but it is understood that they will do their best to meet the demand from the foreign markets even at sacrifice prices.

Owing to the enhanced importation of foreign paper and a contraction in demand within the country, the paper manufacturers have been trying to reduce their unsold stock through the means of production curtailment and a further attempt in the export field.

During the past few years the manufacturers have been exporting their products to China and other Far Eastern markets at sacrifice prices, the association offering bonuses for the encouragement of the export business.

Japanese Curtailment Swells Imports

The committee of the Paper Manufacturers Association of Japan decided recently to increase the production curtailment ratio from the present 35% to 45%, effective from September 1 to October 30.

It is interesting to note that the artificial production control, by which the paper manufacturers have tried to keep up prices in order to tide over the prevailing business depression, has created an increase in imports of foreign paper. Taking for instance printing paper (below 58 grammes) alone, its imports reached 43,195,000 pounds for the first 7 months of the year, nearly three times as much as the figure for the corresponding period of 1930. The figures for the principal suppliers are as follows:

IMPORTS OF PAPER INTO JAPAN
(Amounts stated in pounds—000 omitted)

	1931	1930
Britain	504	457
U. S. A.	1,199	33
Germany	2,299	3,123
Sweden	12,639	9,427
Norway	15,439	2,854
Canada	8,583	.....
Others	2,532	418
Total	43,195	18,312

The total value of the imports for the 7 months of this year was 2,336,000 yen as against 1,205,000 yen for the last year.

Austin Company Executive Holds Optimistic View

Following a trip of four weeks' duration which carried him over an extensive territory in the Central and Lakes states, George W. Plaisted, vice president of the Austin Company, construction engineers, has returned to his Seattle office viewing the prospects of the pulp and paper industry with enthusiasm.

Under the direction of the Seattle office the Austin Company has in the past several years supervised a number of construction projects of varying size for Pacific Coast pulp and paper mills. At the present time they are carrying out some work for the Rainier Pulp and Paper Company at Shelton, Washington, and the Olympic Forest Products Company at Port Angeles, Washington.

Mr. Plaisted expressed the opinion that the deflation of commodity prices which has been so general in the past two years, applicable to the paper industry in measure more or less equivalent to other fields, had emphasized the necessity for plant modernization if a mill was to continue in competition.

"There are many old mills in the Middle West and Eastern states," Mr. Plaisted said, "that are cumbersome and costly under modern conditions of production. Multi-story buildings with complicated and inefficient conveying equipment that prevent the achievement of anything approaching straight line production are one example of building design that modern conditions of keen competition have rendered obsolete."

Mr. Plaisted reported a continued interest in the pulp-paper possibilities of the Pacific Coast region. There was a wide general interest, with a specific interest here and there which held prospects eventually for development of new construction in the Far West states. West Coast pulp is now moving into the Midwest territory in large tonnage and is being favorably received.

Work On New Tacoma Roofing Mill

Work is progressing with a small crew on the roofing paper mill being built by the Riverside Paper Company at Tacoma, Washington. The plant is located adjacent to the north end of the Pacific Highway bridge across the Puyallup River at the Tacoma city limits.

The buildings are of wood and the layout is in one straight line. A small paper machine purchased from an idle mill in Pennsylvania is now being set, along with some other auxiliary equipment. Capacity will be about 10 tons daily.

The boiler plant is being erected in a separate building at one side of the main mill buildings. The company will make all of its own steam and will generate a portion of its power requirements.

Roofing will be made from old rags and waste papers.

R. E. Sannes is president of the company. He has for some time been a roofing sales representative in the Western Washington territory.

Japan's Production and Sales of Paper
July, 1931

	Production (lbs.)	Sales (lbs.)
Printing Paper (Superior Quality)	13,353,346	10,531,644
Printing Paper	11,187,211	9,667,084
Writing Paper	2,131,578	1,596,249
Simili Paper	12,345,696	7,813,450
Art Paper	1,110,699	954,399
News Printing Paper	41,945,931	43,269,750
Sulphite Paper	5,436,148	4,915,154
Colored Paper	1,498,428	1,583,894
Wrapping Paper	10,442,142	10,355,395
Chinese Paper	1,596,923	962,163
Board Paper	5,999,405	6,881,615
Sundries	4,965,339	5,104,831
	112,012,846	103,635,628

Scott Paper Company has placed in production a new tissue machine having a speed of 1,200 feet per minute, and now has an additional 30 tons a day for the market. The company is now said to be the world's greatest tonnage producer of tissues.

Norwegian Labor Conflict Ended

The prolonged and serious labor conflict in Norway finally has been settled, it is reported by Commercial Attache Marquard H. Lund, Oslo. On September 7 the paper and pulp industry reached an agreement with its workers and production was resumed immediately. All other labor organizations, except masons, also reached agreements concerning resumption of work, but the Employers' Association insisted that they would not call off the general lockout unless the masons accepted. The masons apparently gave in. Average reduction of wages are between five and eight per cent which is considerably less than originally requested by the employers. The struggle has lasted since late in March and caused serious losses in the industrial production. Norwegian export tonnage has largely been drafted to Swedish and Finnish mills. The employers claimed that existing high wages kept the cost of production at a level where it was impossible for them to meet competition. The workers, however, claimed that in view of the advantage accruing to the employers through the drop in the cost of raw materials, they were entitled to present wages inasmuch as the drop in the cost of living has been very slight.

The cut proposed by the employers was reported to be as large as 12% in some cases.

A new paper mill in Sweden is announced as completed for Billeruds. It is stated that the machinery is completely installed and that operations are scheduled to begin within a short time. The new plant is located on Lake Wener, near Karlstad and will produce 15,000 metric tons of kraft paper yearly. The mill will employ about 175 workers. In addition to the above production of kraft, it is also scheduled to turn out 45,000 metric tons of bleached rayon sulphite pulp, 25,000 tons of wet strong sulphite, 18,000 tons of greaseproof paper and specialties, 6,000 tons of sulphite paper, a quantity of wooden goods, and 1,200,000 liters of sulphite alcohol. The effort of the operating concern is to specialize on products not subject to over-production and violent trade fluctuations.

To Build Pulp Mill in France

A chemical pulp mill is to be built in France, according to a recent report from Commercial Attache Lund, Oslo. The mill will be constructed in Ussel, a district where there is an abundance of spruce and pine with a fibre similar to Swedish pulpwood. Construction is already under way, and equipment will be of the same general type as used in Swedish pulp mills. The share capital of the company will be 10,000,000 francs, most of which has been signed in France.

Drury Heads Link-Belt's Seattle Office

Ralph S. Drury, for 17 years resident sales engineer at the Seattle office of Link-Belt Company (Pacific Division), has recently taken charge of sales and engineering for the company in the Seattle district following the transfer of Ralph H. Hoffman to the San Francisco office.

Mr. Drury has an intimate knowledge of elevating, conveying and transmission machinery and its application to northwest practice in the various industries in this district. Before coming to Seattle he was located for a number of years at the general offices of the Link-Belt Company in Chicago and was also employed for six years as assistant to the chief engineer of the Union Pacific Railroad at Omaha.

Mr. Drury is a graduate of the University of Illinois in mechanical engineering.

Biggs Boiler Adds New Man

Alfred C. Fickes, for the past eight years general sales manager of the Lancaster Iron Works, Lancaster, Pa., and well known in steel plate fabricating lines, recently became associated with The Biggs Boiler Works Co., of Akron, Ohio, as sales manager. He has been identified with the steel industry for many years, as a mechanical and structural engineer with the Philadelphia and Reading Coal and Iron Co., Lehigh Coal and Navigation Co., Southern Pipe Line Co., Bethlehem Steel Co., and McClintic-Marshall Construction Co., before entering the service of the Lancaster Iron Works in 1915 as chief engineer.

Shartle Brother Machine Announce New Department

Walter L. Glass will in the near future take charge of a new department to be inaugurated by the Shartle Division of the Black-Clawson Company, manufacturers of paper mill machinery, Middletown, Ohio. Mr. Glass, who has been identified with the paper industry for many years, was formerly associated with the Goodrich Company, the Abitibi Company, and more recently with the Tolhurst Machine Company. Mr. Glass joined the Shartle company on October 1 and will make his headquarters at Middletown.

New Elwell-Parker Booklet

The Elwell-Parker Electric Company has just published an instructive booklet, "Paper Must Be Moved Easily—Cheaply."

Illustrated with over 45 photographs of actual handling operations in the paper and publishing industries, this booklet explains many of the modern methods of paper handling and contains many valuable suggestions to the organization that uses large quantities of paper, whether paper manufacturer, publisher or paper jobber.

Stebbins Moves Eastern Office

The Stebbins Engineering & Manufacturing Company, well known thruout the trade for their services in lining sulphite digesters, have removed their Watertown, New York offices from 518 Light & Power Building, to 411 Trust Company Building.

The company's Pacific Coast office is in the White Building, Seattle. Mr. A. S. Quinn is in charge as Western representative.

New Kraft Mill In Sweden

The construction of a new sulphate pulp mill in Sweden by the Kreuger interests is proceeding rapidly near Ostrand, about seven miles north of Sundsvall. The annual capacity of this mill will be 100,000 metric tons and the cost of construction is estimated at 50,000,000 Swedish crowns (1 crown equals 26.8 cents). It is expected that the mill will be completed before the end of the year.

Dr. George B. Herington, secretary-treasurer of the Oregon Industrial Accident Congress, reports that he expects within about a week to have completed the committee of six who will formulate a state SAFETY manual for the pulp and paper industry. The members of the committee have already been nominated, but confirmation of these appointments by some of the mill operators is awaited. The committee will include one representative from each Oregon mill.

The SAFETY manual produced by this committee will be passed on by the Oregon State Accident Commission, which after a public hearing is empowered to adopt such manual as basic for the industry.

The Paper and Pulp Industry In July, 1931

According to identical mill reports to the Statistical Department of the American Paper and Pulp Association from members and cooperating organizations, the daily average of total paper production in July decreased 1% under June and was 3% under July, 1930. The daily average wood pulp production in July was 10% below June, 1931, and 8% under July, 1930.

Compared with July a year ago, the daily average production registered a decrease in the following grades: Newsprint, uncoated book, writing, and hanging papers. Compared with June, 1931, the following percentage decreases were registered in the daily average production: Newsprint, 1.5%; uncoated book, 7.2%; wrapping, 0.1%; writing, 10.2%; hanging, 3.8%; and building, 2.0%.

The seven months' cumulative total of production of paper was 10.4% below the corresponding period in 1930 while shipments were 9.7% smaller than a year ago. All the major grades of paper, excepting writing and hanging papers, have shown improvement at the end of the seven-month period as compared with the end of the six-month period.

The seven months' cumulative total of wood pulp production for this year was reported as 17.6% below the level of the same period in 1930.

Total shipments of wood pulp to the outside market were 28.1% below the level of the seven months' total of 1930. Bleached sulphite, mitscherlich and kraft pulp shipments to the open market were greater than in the first seven months of 1930.

Total wood pulp inventories showed a continued decrease and at the end of July, were 26% below the level of July, 1930. All grades, except mitscherlich pulp, showed inventories below the level of July, 1930.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF JULY, 1931

GRADE:	Production Tons	Shipments Tons	Stocks on Hand End of Month—Tons
Newsprint	99,548	97,225	33,616
Book, Uncoated	69,666	70,960	46,816
Paperboard	160,826	163,484	59,739
Wrapping	44,502	44,920	42,833
Bag	12,054	12,465	5,996
Writing, etc.	21,126	22,176	47,778
Tissue	6,163	6,236	4,390
Hanging	2,631	1,847	2,105
Building	5,179	4,714	3,313
Other Grades	13,672	13,206	14,385
Total, All Grades July, 1931	435,367	437,233	260,971
Total, All Grades, 7 mos. 1931	3,098,908	3,098,189	260,971
Total, All Grades, 7 mos. 1930	3,459,178	3,429,897	266,059

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF JULY, 1931

GRADE:	Production Tons	Used During month—Tons	Shipped During Month—Tons	Stocks on Hand End of Month—Tons
Groundwood	66,428	70,762	1,689	67,584
Sulphite News Grade	27,239	25,744	407	6,124
Sulphite Bleached	17,631	15,612	2,112	2,900
Sulphite Easy Bleaching	2,366	2,359	18	885
Sulphite Mitscherlich	2,947	2,142	754	1,906
Kraft Pulp	27,079	23,038	5,211	4,800
Soda Pulp	15,813	13,221	2,735	2,859
Pulp—Other Grades	601	467	72	163
Total, All Grades July, 1931	160,104	153,345	12,998	87,221
Total, All Grades, 7 mos. 1931	1,219,715	1,097,872	103,894	87,221
Total, All Grades, 7 mos. 1930	1,480,157	1,282,635	144,471	117,899

POSITION WANTED

Paper Mill Engineer, expert on flow systems and white water economy. Competent designer of reinforced concrete and structural steel. Experience: 8 years on maintenance and testing, 6 years on design of new mills.

Address Box 114, care of Pacific Pulp and Paper Industry, 71 Columbia St., Seattle, Wash.

News Print Production—August, 1931

The News Print Service Bureau's Bulletin No. 164 states that production of news print paper in Canada during August 1931 amounted to 165,124 tons and shipments to 162,303 tons. Production in the United States was 88,344 tons and shipments 89,047 tons, making a total United States and Canadian news print production of 253,468 tons and shipments of 251,350 tons. During August, 24,402 tons of news print were made in Newfoundland and 1,351 tons in Mexico, so that the total North American production for the month amounted to 279,221 tons.

The Canadian mills produced 219,739 tons less in the first eight months of 1931 than in the first eight months of 1930, which was a decrease of 13%. The output in the United States was 106,808 tons or 12% less than for the first eight months of 1930. Production in Newfoundland was 4,726 tons or 2% more in the first eight months of 1931 than in 1930 and in Mexico 655 tons more, making a continental decrease of 321,166 tons or 11%.

During August the Canadian mills operated at 51.3% of rated capacity, United States mills at 59.2%, Newfoundland mills at 96.4% and Mexican mills at 73.2%, making a continental average of 56.1%. Stocks of news print paper at Canadian mills totalled 49,128 tons at the end of August and at United States mills 32,607 tons, making a combined total of 81,735 tons, which was equivalent to 4.5 days' average production.

NORTH AMERICAN PRODUCTION

	Canada	United States	New-foundland	Mexico	Total
1931—August	165,124	88,344	24,402	1,351	279,221
8 Months	1,486,823	783,016	194,967	10,322	2,475,128
1930—8 Months	1,706,562	889,824	190,241	9,667	2,796,294
1929—8 Months	1,766,216	930,169	167,652	12,726	2,876,763
1928—8 Months	1,546,167	944,781	151,882	10,751	2,653,581
1927—8 Months	1,340,234	1,021,037	133,476	9,669	2,504,416
1926—8 Months	1,219,335	1,123,658	117,065	8,227	2,468,285
1925—8 Months	990,343	1,005,842	49,563	8,589	2,054,337
1924—8 Months	907,693	991,523	43,439	7,664	1,950,319

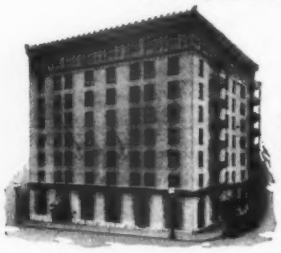
New Line for Grays Harbor Pulp & Paper Company

The Grays Harbor Pulp & Paper Company at Hoquiam, Washington, will produce a new line of ruled and unruled school papers. The plan is to put out a variety of tablets, pads, fillers, typewriter paper and theme paper both in plain white and in colors. The Grays Harbor product will be high grade, the idea being to market it on a basis of its quality.

The plans are not as yet completed for this line, according to W. S. Lucey, the local manager, but details will develop rapidly if present plans are followed out. When the line is incorporated in the products of the company, it will be handled through a new and separate department in the big mill at Hoquiam.

THE HOTEL CONGRESS

The stopping place in Portland for Pulp and Paper Men



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Sidney Roofing Marketing New Shingle

The new Thick Butt Duroid Shingles manufactured by the Sidney Roofing and Paper Company of Victoria, B. C., are pronounced as an outstanding advance in roofing materials, according to British Columbia architects and contractors.

News Notes From the Camas Mill

No. 12 paper machine at Crown Willamette Paper Company's Camas mill has been idle for a short time. The closing is indefinite, but it has been intimated that orders of sufficient volume will soon justify renewing production on this new unit. The No. 12 machine crews have been distributed temporarily to other parts of the mill.

The Camas mill has been maintaining a good degree of production considering the volume of orders available to the paper industry as a whole. Rumors of a five-day week at the Camas mill are without support. The mill manufactures a wide line of specialty papers and is therefore independent of fluctuations that might otherwise handicap a mill operating on only a few grades.

Emigh To Be Assistant to Ostenson

Elmer Emigh, who recently joined the operating staff of the Camas mill of Crown Willamette Paper Company upon leaving the St. Helens Pulp & Paper Company, has been made an assistant to Henry E. Ostenson, paper mill superintendent.

IMPORTS OF PULP WOOD AND WOOD PULP INTO THE UNITED STATES BY COUNTRIES AND CUSTOMS DISTRICTS

July, 1931

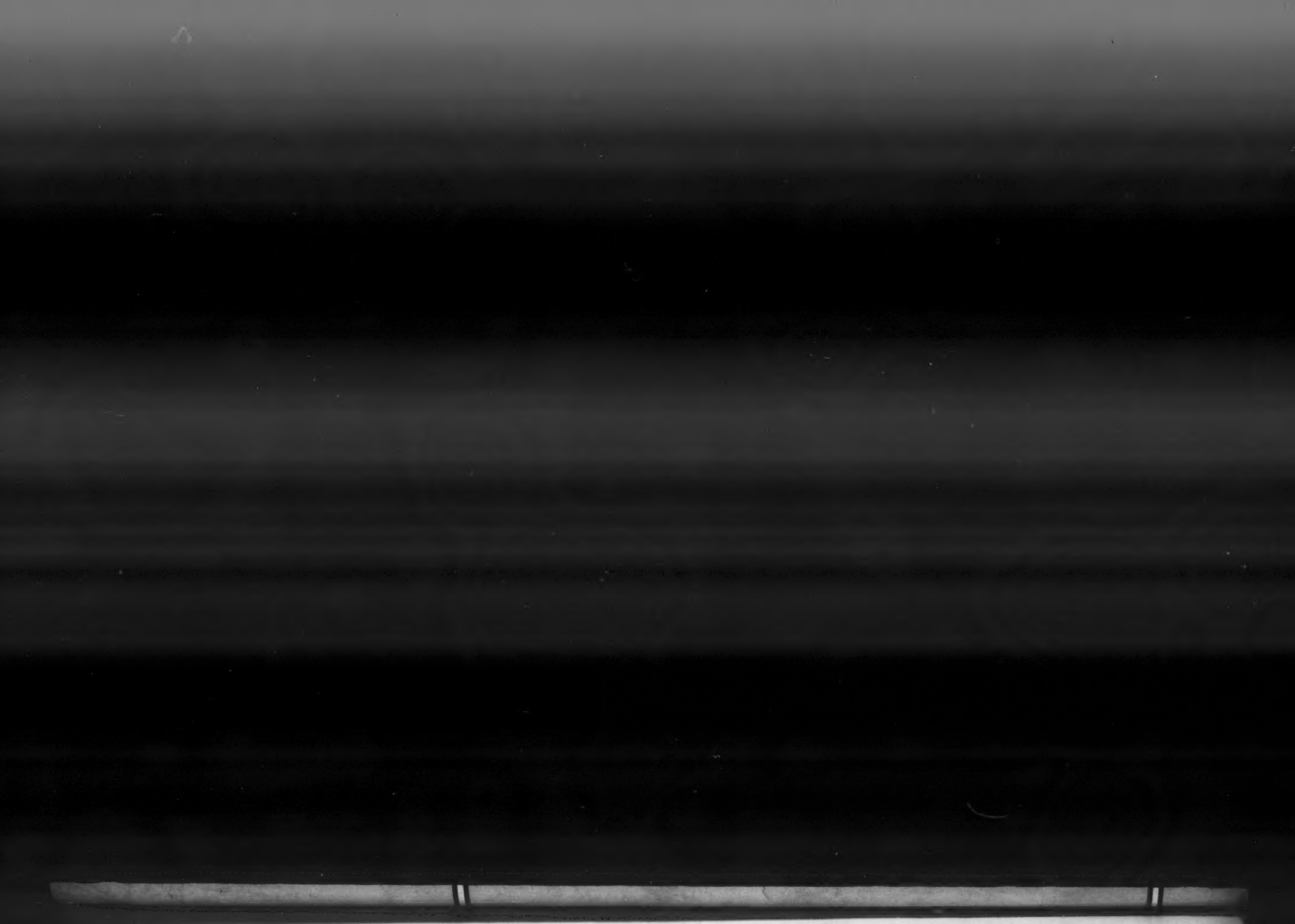
Compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce
(Figures Subject to Revision.)

PULP WOODS

	Rough				Peeled				Rossed			
	Spruce		Other		Spruce		Other		Spruce		Other	
	Cords	Dollars	Cords	Dollars	Cords	Dollars	Cords	Dollars	Cords	Dollars	Cords	Dollars
COUNTRIES—												
Germany					53	707						
Sov. Russia in Eur.					2,870	40,891						
Canada	29,155	319,178	1,100	11,000	67,915	835,566	13,263	120,509	653	7,379		
Total	29,155	319,178	1,100	11,000	70,838	877,164	13,263	120,509	653	7,379		

Total Imports of Pulpwood, July, 1931—115,009 cords—$545,230.

WOOD PULP

	Mechanically Ground				Chemical Unbleached Sulphite		Chemical Bleached Sulphite		Chemical Unbleached Sulphate		Chemical Bleached Sulphate		Soda Pulp, Unbleached and Bleached	
	Unbleached		Bleached											
	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars
COUNTRIES:														
Czechoslovakia					517	23,964	648	33,951						
Estonia					723	26,959								
Finland	997	30,454	779	23,264	7,079	309,940	663	35,880	6,936	217,101	206	10,584		
Germany					1,238	54,239	3,129	181,818						
Lithuania					2,371	87,920								
Norway	150	3,466	941	19,783	395	22,672	428	29,153						
Sweden	1,175	32,808	585	13,684	26,494	1,094,225	2,249	135,409	29,914	900,765				
Yugo. and Albania					502	15,950								
Canada	11,199	306,915			7,164	304,921	13,516	862,856	1,301	79,642	1,265	120,849	267	14,284
Poland and Danzig									200	5,374				
Total	13,521	373,643	2,305	56,731	46,483	1,940,790	20,633	1,279,067	38,351	1,202,882	1,471	131,433	267	14,284
CUSTOMS DISTRICT—														
Maine and New Hampshire	3,242	97,612	25	757	7,288	345,437	2,902	204,085	10,916	312,721				
Vermont	758	17,542			712	25,563	1,037	59,421	1,080	70,677	1,219	116,963	104	5,500
Massachusetts			651	12,278	5,617	229,113	2,972	181,831	7,031	238,411	100	4,983		
Connecticut	594	11,872												
St. Lawrence	971	24,302			353	14,322	2,664	165,290	100	5,947			105	5,827
Rochester							16	783	33	1,125				
Buffalo	651	19,177			1,950	74,799	799	62,702						
New York	130	3,867	175	4,587	11,584	456,152	1,549	86,637	2,570	86,718	52	2,591		
Philadelphia	1,896	59,689			2,021	84,780	915	49,928	921	25,721				
Maryland	1,067	31,140	200	4,686	8,831	391,341	771	41,345	3,839	123,909				
Virginia			754	22,507	3,329	149,166	1,138	65,832	6,812	189,079	54	3,010		
Mobile					120	4,698								
New Orleans							25	1,262						
Los Angeles			500	11,916	331	19,482								
San Francisco					1,468	37,494			88	1,893				
Washington					219	6,266								
Dakota	69	1,897					358	18,724						
Duluth and Superior	606	10,473			131	2,013	27	1,412						
Wisconsin	801	23,090			1,303	57,737	50	2,536	4,961	146,681				
Michigan	2,736	72,982			1,226	42,427	5,410	337,279			46	3,886	58	2,957
Total	13,521	373,643	2,305	56,731	46,483	1,940,790	20,633	1,279,067	38,351	1,202,822	1,471	131,433	267	14,284

Total Imports, All Grades of Woodpulp, July, 1931—123,031 Tons; $4,988,830.